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Communications.

DIAGNOSIS AND TREATMENT OF BENIGN TUMORS.

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A tumor, as the word signifies, is any swelling. But from this broad definition practical wants have led to the very many divisions, subdivisions and classifications that crowd our exhaustive works on surgery; indeed, this one subject not only claims more space than any other in them, but whole works are published continually on tumors as a class, or even on any one kind of tumor. Certainly this is perplexing. It is our aim, therefore, in the present article, to place before the general practitioner such condensed information on the subject of benign tumors as may be useful in ordinary practice.

Under the term new growth, foreign growth, in its widest sense, are comprehended all those foreign processes that take place in the human body; either by cell formation, or by precipitates and concretions out of the liquids. The latter possess no texture; these are mostly stones and irregular concretions. On the other hand, we may readily recognize a regular structure and texture in the first named, which, in chemical relation also, claim for them the designation of "organic;" moreover, they offer a long list of common characteristics, which in many respects are entirely independent of the tissue or part in which they appear.

These organic new growths fall, of themselves, into two groups, benign and malignant, principally the former claiming attention in this paper. In spite of the great variety of organic new growths, they all resemble each other in one respect, and that is, that they are composed of the same morphological elements that we find also in the healthy body, and develop themselves on the same plan of construction as normal tissue. In the arrangement and length of development of their elementary principles, the different new growths vary perceptibly as well from normal organs, as from each other. It is upon this and upon the different texture of the pseudoplasma that the distinction above named founds itself, of which more anon.

It is of great importance, theoretically as well as practically, that the morphological elements of new growths can be subject to the same changes as those of the normal organs of the body—namely, the so-called regressive metamorphosis; the fatty, colloid, amyloid degenerations, the mucous softening, the chalky (lime) and bony processes. The chemical composition of new growths shows no marked differences from that of normal tissue.

Albumen, fibrin, cheesy matter, fat, further, substances that give lime and cartilaginous lime on boiling, pigment, also the ordinary salts, cooking salt and phosphate of lime, and finally, water, in greater or less quantity, have been with certainty demonstrated, by chemical analysis, to exist in tumors. In tumors we often find widening and tearing of the blood vessels that run through them, therefore, also, bleeding, inflammation, ulceration and gangrenous disturbance are also found.

Ætiology.—The general ætiology of new

growths is very dark. As local cause, only a certain irritation of the diseased part can be considered. As regards predisposition, it may be noticed that new growths are not unfrequently inherited; sometimes they are on the patient when born; again, they are at other times endemic or epidemic. Predisposing are also early youth and old age, overwork and insufficient food, also other disturbances of the general system, brought about by former diseases. But to return to our two groups—embracing all tumors known—benign and malignant.

From a practical standpoint those tumors are benign which rest upon purely local causes and interfere with certain functions only by pressure upon or pushing aside organs. They can entirely stop the action of an organ, and thus become harmful to the individual, even, perhaps, threatening life, but do not at all exercise any evil influence directly upon the general system. Finally, they remain circumscribed in the locality where they sprung up, and do not return after extirpation. In distinction from these we designate as malignant tumors, those that continually and steadily grow, and finally soften (break down); that successively appear in different places and different organs; that return upon the same or other places after extirpation (recidiration), finally, that develop a marked and general affection (cachexia), and most always bring death to the individual suffering from them.

To the first belong fatty tumors (lipoma), sebaceous tumors (steatoma), fibrous tumors (fibroma), the different skin tumors (cysts, lupiæ) and bone growths (exostoses); vascular tumors (aneurisms, varices, telangiectasis), also polypi, cartilaginous tumors (enchondroma), that first became distinguishable by microscopic research, and were earlier mostly classed under the so-called steatoma, but only on account of their consistency and outward appearance. The representative of malignant tumors, from Hippocrates down to the present day, is cancer (carcinoma), so that malignant and cancerous are still used as synonymous. The fungus medullaris can be only technically a distinct or separate form of cancer; its origin being a hardened mass (scirrhus). Sarcoma is also included, and the tubercle, that formerly belonged to inner medicine only, in the category of malignant neoplasms.

Diagnosis and Treatment of Fibroma.—The diagnosis of fibroma is not without difficulty. Fibrous tumors can be confounded with other hard tumors, or even some soft ones; in many cases it is, for instance, difficult to say with certainty whether the tumor is more of a fibrous or sarcomatous nature. The diagnosis, by a due regard to the tough, stringy or knotty consistency of the tumor and its hardness, must be our main *point d' appui* in excluding other growths, such as enchondroma, osteoma, cavernous tumors, cysts, cancers and sarcoma. Fibrous tumors, like other benign ones, do not possess the tendency of malignant tumors, to soften from the centre out or to soften in different places. As opposed to malignant tumors, fibroids never cause disturbances of the general system, and generally never other disturbances than those of purely mechanical origin and corresponding to the size and locality of the tumor. Swelling of the adjacent lymph glands is absent, except when it is occasioned by inflammation of the tumor. Emaciation and loss of strength are also absent, as a rule, but can develop when the tumor by its position, by ulceration or hemorrhage of its ulcerated surface, produces disturbance of the general system. The only *treatment* of fibroid tumors consists in operative removal. In general, thorough and complete extirpation with the knife is the best; nevertheless, if the seat and relations of the tumor admit it, other means of separation may be advantageous—écrasement linéaire. Chloroform may be given. Prof. Nathan R. Smith used a little chloroform in the extirpation of a fibroid tumor of the breast, in a young colored girl. I had the pleasure and honor to assist him, at his request, in this operation. The patient, a young woman, was about 18 years of age and well nourished, otherwise perfectly healthy, menstruating regularly. The tumor was situated in the left breast, movable and hard. The Professor grasped the tumor at its base and made the incision along the upper surface with a scalpel, and in the long diameter, while I held the edge of the wound and took up the arteries. The operation lasted but a very few minutes; no sutures were used, the edges of the wound being secured by adhesive plaster, and the patient making a good and rapid recovery. The tumor was about the size of a turkey's egg. There was nothing peculiar about the case, but it is a good, typical one, illustrating the ordinary facility with which fibroids may be removed, and a guarantee thus given against return; and it further gives some idea of Prof. Smith's views upon the administration of chloroform during surgical operations. When the girl asked to be thoroughly narcotized, he replied, "I do not want to put you into your last sleep." We gave her, accordingly, a partial narcosis only. In the history of a given case of fibroid we will generally find the growth of the tumor has been slow and without pain.

Diagnosis and Treatment of Lipoma.—Fatty tumors develop themselves almost entirely at an advanced age. The acceptance of the diathesis lipomatosa theory is not warranted by practical observation. The etiology is dark. A blow, push or knock may cause them. They grow slowly and without pain to the patient, whose first inconvenience from them is felt when they attain a large size. To the hand they feel like lumps of normal adipose tissue, that can be pushed aside, and have always a certain tough resistance. The diagnosis of this particular kind of tumor is comparatively easy. Pharmaceutical treatment almost useless. Extirpation is the only radical cure, and this should be done as early as possible. If the tumor has attained the size of a nut or of a hen's egg, or is growing in such a manner as may be seen from day to day, then the operation should be performed at once, as it is very simple, and certain success always follows it at this period, while longer delay invariably brings some dangers. But if the base of the tumor has already considerably passed the size of a hand, then it is better, as a rule, not to operate; because such a lipoma left to itself has never death as a consequence, while an operation that would leave a wound surface of such extent, even undertaken in the most favorable conditions, may endanger life. If the tumor threatens to break through the skin, the operation should be performed, under almost all circumstances; also when the seat of the tumor endangers life. The extirpation of fatty tumors requires great care. At times it is impossible to remove all parts of a lipoma. But even if we remove the most of it we have accomplished much, and it is pretty well established that pieces left behind neither become the germs of larger tumors nor interfere in any way with cicatrization.* In the case cited by Burow,† who extirpated an enormous growth of this class, weighing 27½ pounds, it was impossible to remove the whole tumor. "The healing of the wound took place with incredible rapidity, although large pieces of the still remaining lipoma died in the wound and sloughed off." Considerable hemorrhage may occur, but this is exceptional. If the patient is knife-shy, the écraisement linéaire is in order, but the galvano-caustic wire is much better, and prevents effectually hemorrhage from smaller vessels. Sometimes it is possible, after making an incision in the skin, to isolate and tear out a lipoma with the fingers, by pulling the tumor toward the operator with one hand and pushing back the skin from around it with the other.

Diagnosis and Treatment of Enchondroma.—The cartilaginous tumor forms a round mass with smooth or slightly nodulated surface, that can attain different sizes; sometimes very large size. The commencement may be only as large as a pea, and can take place wherever cartilage exists in the body (Virchow). Not infrequently these tumors, later on, become ossified. They generally cause little trouble beyond pressure, and can exist for from fifteen to twenty years as harmless tumors. The chemical examination of enchondroma has determined that they give chondrin as their main principle. As regards their etiology they often date from earliest childhood, and I. Müller notes especially that the mechanical influences of life and the process of formation of bone during childhood are the first causes of abnormal cartilaginous growth. As far as my own personal experience is concerned I have generally seen them on the fingers and toes. One case of great interest merits a line in this connection. It was that of a young man of about 25 years of age, who had enchondroma of the size of black walnuts on all the fingers and toes of both hands and both feet. Operation was, of course, not thought of, and the patient, who lived in a small German town (Juebingen), came periodically to Baun's clinic, where I was practicing at the time, to be exhibited to physicians and students, more as a surgical curiosity than anything else.* Enchondroma feel hard to the hand, and their diagnosis on the living is not always easy. Even when they are situated on the periphery, and are thoroughly cartilaginous, they have a resistance that resembles that of bone; they feel as hard as stone, ivory-like, as a scirrhus of the breast or a true bony tumor (exostosis). This is exceptional, however. They generally possess a light, glandular, warty surface, of large size, and the nodules on the periphery appear to roll themselves inward, and not to go over directly on to the base of the tumor (soft parts or bones). Exostoses, on the contrary, have a smooth or jagged surface, and spread evenly on all sides in the bone substance. The differential diagnosis is more difficult as regards fibroids, as enchondroma can develop themselves, not only in soft parts, but also on bones, and sometimes *inside* bones, and for this reason can be covered with a bony capsule outwardly, formed by pushing up the bone from within.

* Lebert. *Abhandlung der practischen chirurgie*, p. 119.

† Burow. *Deutsche Klinik*, No. 24.

* In this case the tumors were situated on the last rows of phalanges, at the joints.

The only successful treatment is operative. Even this is not always advisable, unless the tumor, by its position and size, interferes with the function of important parts or threatens danger from expectant breaking out. According to its position, the extirpation may be made by the knife, or with saw and chisel, or we may amputate the part upon which the growth sits. The experience of Dieffenbach in this respect is very valuable, that even after partial extirpation cicatrization can follow. The ossification of pieces of enchondroma left in the wound is regarded as fixed.* If part of the tumor is soft, if it is combined, or is a cystochondroma, we can never count upon anything but a total extirpation. If large arteries run through an enchondroma we may have great difficulty in arresting hemorrhage, in making a partial extirpation, as it is impossible to get hold of the vessel with the pincette, to tie it. As it lies imbedded in the cartilaginous substances, our only recourse is cautery with the iron (actuale); even this does not always suffice. The galvano-caustic would be more likely to meet our wants here than almost any other method.

The Diagnosis and Treatment of Exostoses naturally follows, just as enchondroma may become exostoses; and these latter pathologically have the same distinguishing features as enchondroma. We have a soft, porous, spongy exostosis, a hard, ivory-like exostosis, and osteo-cartilaginous exostosis. Exostosis can exist on any bone. It is usually of slow growth, and the soft parts covering such a bone remain healthy. There is no pain during the earlier stages of growth, or even later, unless the exostosis, having attained a very great size, presses severely upon the soft parts, when inflammation may follow, bringing ulceration of the skin, and this in turn succeeded by laying bare the exostosis. Rokitansky and Nélaton attribute the ending in necrosis only to the hard, smooth, ivory-like growth (exostosis eburnea), probably on account of the great dearth of canals for the blood vessels—Haversian canals. Any of the forms of exostosis may become inflammatory, suppurative and carious. They probably rest upon a dyscrasia, or are often hereditary. There may be only one, or many, and on different parts of the body. There is but little more to be said as regards the diagnosis of these immovable, hard, jagged, or smooth, bony tumors—in so far as palpation is concerned; there is less that will aid us in making a diagnosis of exostoses if they cannot be reached by the hand, on account of lying deep and being covered with soft parts; for if undoubted exostoses do not exist on other parts of the body, and thus lead us on the right track, we may as justly attribute the functional trouble to a tumor of another class. In comparison with enchondroma, the surface of an exostosis is smoother, less nodulated, but often sharp, like a cock's comb. The treatment of exostosis is always difficult, sometimes dangerous, often useless. We may only expect results from antiphlogistic and anti-dyscrasic means, when we have to do, not with a true exostosis, but with an osteophyte still in process of formation; that is, with an inflammation of the bone or periosteum. True exostosis can only be removed by surgical operation. If its position is such that the operation would be more dangerous than the further growth of the tumor, it should be left untouched. If the patient desires an operation on account of deformity, or great pain, or interference with the use of parts, it may be performed, provided there is no special danger. Nevertheless, no matter what plan is adopted for the removal of an exostosis, there are all the dangers of a deep-seated suppuration, with affection of the bone to follow; osteo-myelitis, ending in pyæmia, after simple removal of an exostosis, has been frequently observed.

The operation for exostosis consists: 1st, in sawing off, *i. e.*, extirpation of the tumor; 2d, the employment of actual cautery; 3d. resection of the part of the bone on which the exostosis sits; 4th, amputation of the part affected. The ordinary operation, that is, the one that the general practitioner will oftenest have to perform, consists in laying bare, fully and freely, the exostosis by a long incision, the skin being held back by hooks, one on either side, in the hands of an assistant; the tumor is then sawed off with the saw, chain saw, or removed by chisel and hammer, care being taken to hold the chisel well down, parallel to the bone. In vascular, spongy exostoses, with broad base, the best method is the pereum caudens, as it gives us a guarantee against profuse bleeding. Only under these circumstances should actual cautery be employed in the removal of exostoses, as it always causes a partial necrosis, followed by inflammation and suppuration. In order to prevent this, it has been proposed to lay bare the exostosis, carefully scrape off the periosteum, and leave the rest to nature. Necrosis of the upper layer may be, of course, expected after this, but it is extremely doubtful if the whole tumor could be sloughed off in this way. Osteoma of the soft parts must be extirpated like other tumors.

Diagnosis and Treatment of Telangiectasis,

* Lebert. Loc. cit.

Fungus Vasculosis, Nævus.—These are mostly congenital, sometimes caused by a blow, push, or pressure. Mostly on the outer skin; they may, however, appear on mucous membranes; for example, on the lips. Diagnosis generally easy. They may exist on all parts of the body, varying in color from a bright red to a dusky purple and dark brown, in size from a pin's head to that of a black walnut. They have been mistaken for epithelioma, aneurism, lipoma and varices, but these are extreme exceptions, not likely to be met with in general practice; the characteristics of the tumors mentioned being usually so very marked as to make a mistake difficult; besides, they belong to a more advanced period of life. The forehead is often chosen as their seat. Simple angioma is never malignant, even though local recidiration may occur after incomplete extirpation. My plan is to let a nævus alone, unless it grows rapidly. From the long list of therapeutical and operative measures, the following will be found most useful: Compression by bandage, application of cold and astringents (Abernethy). If the tumor is a very vascular one, ligature of the artery leading to it, thus preventing further engorgement of the veins, the primary cause of telangiectasis (and to it these tumors owe their softness when touched by the hand), also are recommended, the introduction of a seton, the hypodermic injection of perchloride of iron (Carter has seen death caused by embolism after this; it is, nevertheless, endorsed by different authorities);* further, the actual cautery, and cautery by medicaments—chloride of zinc. I tried the lapis infernalis in one case—the nævus, a small red speck resembling a broken vein, upon the cheek of a little girl about four years of age, at first increased in size and then began to diminish, and is now disappearing, about the fourth week after the cauterization. They will often do this, however, if left to themselves. Concentrated nitric acid applied on the point of a pine stick, is probably the most effectual caustic. If we have a medium-sized and soft warty tumor (nævus), with pedicle, we may pass a silk thread around and strangulate it—cauterizing the wound surface left with argent nit. (lapis). Sir William Ferguson ran two long needles through the base of a nævus; these were armed with silk thread and were passed through, the one horizontally, the other perpendicularly; the four ends of the threads left projecting after the needles were withdrawn were then tied together and the nævus thus cut off. If the tumor is a fungus hematodes, the following application will act very well:—

℞. Potas. iodid.,
Aquæ, āā ℥j. M.

This makes an excellent caustic, and will speedily check the advance of the tumor, if applied every day or two as occasion requires, and continued for some time. If the telangiectasis is of a cavernous kind, filled with either blood or lymph, palpation will give us valuable points, especially as regards fluctuation. If opened, the cavern should be swabbed out with a small sponge, wet with a solution of carbolic acid and glycerine, in equal parts, and dressed with adhesive plaster. Great care should be exercised if the diagnosis reveals a cavernous tumor. The galvano-caustic is here, above all, the most sure method, and the one that will give the best results.

Diagnosis and Treatment of Glandular Tumors—Adenoma.—The diagnosis of adenoma is readily arrived at from hyperplasia of a gland, on which it always sits. Almost all that has been said with reference to healing tumors by operation and pharmaceutical means holds good here, only we may obtain better results with medicaments and compression in adenoma, than in other tumors. One remarkable case that came under personal observation, was that of a man in middle life, whose left breast being affected with adenoma, had swelled to the size of that of a girl of sixteen years; the nipple was regularly elongated, the tumor soft to the touch and altogether like a normal female breast. No treatment was given, as the tumor had become stationary and was not objected to by the patient.

Polypi.—Medium hard, bright red or yellowish growths, mostly on mucous membranes, from which they hang by a stem. They are covered with cylinder-epithelium externally; toward the centre they present a mass of thickened mucous membrane, having its origin in a hypertrophy of the minute slime or mucous glands. The cause of their formation is usually to be found in chronic catarrhs, and the nose seems to be their first choice. They are of slow growth, and only cause annoyance by a sense of pressure and fullness in the upper part of the nostril, where their stem allows them to slip up and down, and where they may be easily felt and seen, both from the outside and within. Removal is the only cure. This is quickly, easily and safely accomplished by means of a pair of pincers. The patient, seated in a chair, should be made to expirate, by which the polypus will descend a little, when it is firmly

* Bardeleben-Chirurgie, Vol. I, p. 428.

grasped with the instrument and torn out. The operation is attended with but insignificant loss of blood, and as regards after treatment, nothing is necessary. Very rarely we find one at the top of the pharynx, which if of a more compact structure, will be best removed by galvano-caustic.

Sebaceous tumors, cysts, skin tumors, etc., are such growths as are contained in dermoid, round sacks, closed on all sides, the contents being usually either serum or a composition of fat and lime. The sack itself is a part of the tumor. They may also be formed by the encysting of foreign bodies, such as a gunshot or bullet. They are often due to a tendency to fatty degeneration, but little, however, is known about their general etiology. They feel hard and immovable to the touch, are painless and of slow growth. I will select one case out of my own practice as illustrative: G. G., aged 35, male, well developed and healthy, consulted me three years ago about what he supposed to be a shot left in the lobule of the ear from the discharge of a gun. Upon examination I told him it must be a shot, as it felt exactly like one in point of size and consistency, and as he had a gun discharged at him, other shot having taken effect at the time. Last month he consulted me again, as I had declined previously to interfere. The tumor was softer, but still right hard to the touch, and had grown to the size of a bird's egg. I operated, making the incision behind the lobule of the ear, in order to conceal the scar, and extirpating sack and all. The wound was dressed with adhesive plaster only, and healed rapidly per primam. On opening the sack no shot was found, only sebaceous matter. Operation with the knife is the only radical cure in these cases. A hygroma or ganglion may be punctured, and its contents thus emptied; fluctuation and softness, without inflammation, make them easy to diagnose.

A BIT OF CLINICAL EXPERIENCE AT THE OBSTETRIC BEDSIDE.

BY T. CURTIS SMITH, M.D.,
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The obstetrician often meets with cases in labor that need considerable well-directed tact and discrimination to enable him to do the right thing at the right time, and in the right way, for his patient, and also to acquit himself creditably. Sometimes a case needs a good dose of morphia, sometimes a strong oxytocic.

At the time when the discussion as to the oxytocic powers of quinine and the cinchona salts was active, several years ago, I often tried their virtue in tardy cases of labor. Was called about 3 A.M. to a lady who claimed to be having uterine pains. Her time for confinement was fully up, and she had experienced a few sharp contractions. Examination disclosed a wide, open os, very flaccid. I waited an hour. Only two light pains. Os still the same. The lady stated that I need not be in any haste, as she was always two to three days in labor, and this was not in any way different, so far, from previous experience. I considered the history given, and also recognized a state of almost complete inertia. Gave her at once cinchonidia sulph., grs. x. In twenty minutes there was a severe contraction. This was followed quickly by another and another. In thirty minutes from the time she swallowed the cinchonidia she was fully delivered, and the uterus well contracted down. She had a good recovery. I have often repeated this kind of practice in similar cases, and almost always with prompt benefit.

In 1878 I was called to a lady who had, in her first labor, a very tedious siege. Her pains affected her head, and would come and go in the temporal region with quite perfect regularity. The uterine contractions were feeble and ineffectual. What her attendant gave her I do not know. In this, her second labor, the pain was again in the head, as before. I found her to be a feeble woman, much worn down with her previous sufferings. She was thin, pale, pulse feeble, and greatly depressed, pupils dilated, uterine contractions very feeble, extremities cold, os dilated. She begged me not to give her any morphia, as she would "almost die of the nausea that would follow its use." I gave her, however, morphia sulph., gr. $\frac{1}{4}$, cinchonidia sulph., grs. x, at once, and used a hot mustard foot-bath. In half an hour the head was much relieved. A few minutes later the uterine contractions increased in force and regularity. In one hour more she was delivered. After the uterine contractions became fully normal there was no further complaint about the head. She had a good recovery and no nausea or vomiting from the morphia. A few weeks ago I was called to see a lady in whose case the liquor amnii had been drained off for sixty hours, and there had not been a single uterine contraction of any considerable force. The case had been in the hands of a midwife. Examination disclosed an open, flaccid os, lax uterine walls, and a first vertex presentation. The lady seemed as well as though nothing whatever was unusual about her condition. I gave her cinchonidia sulph., grs. xx, in three doses an hour apart. In a short time feeble uterine

contractions came on. These rapidly increased in force until the delivery was quite rapidly completed. I might detail many cases more or less like these, and where cinchonidia or quinine seemed to be of great utility, and to act with great promptness in stimulating uterine contractions.

On the other hand, there are many cases of labor where the pain is very severe, but there is not a corresponding uterine contraction; hence the pains continue to come on for hours without manifesting any expulsive power. Often a full dose of morphia will settle this needless distress, and the contractions will come on normally and labor proceed to a fairly happy conclusion, or the pains will cease altogether and allow the patient a more or less prolonged respite before labor is fully inaugurated. These cases may call forth a separate paper at another time.

In April, 1878, I was called to see a large, healthy lady, in her ninth labor. She was suffering intensely with headache; face flushed, pulse hard and full, pupils contracted, light painful. The uterine pain was light and irregular. I ordered potass. brom., ℈j, every two hours, with also gtts.ij of fl. ext. aconite root, hot mustard foot-bath, and an enema, which cleared the bowels quite freely. Left word to call me at once if there was an increase of head pain, or if labor demanded attention. I feared convulsions, and believed venesection the right practice; but as it was so heavily condemned I desisted for the time. Eight hours later was called. All the suffering in the head greatly intensified and symptoms aggravated. I then tied up the arm, bled her twenty-four ounces before the pulse showed any signs of softening down or the face to lose its turgid flush. She at once lay down and slept two hours, when she was awakened by a sharp labor pain. In one and a half hours she was delivered of a healthy girl. Never had a head pain or untoward symptom after venesection was practiced.

Some years ago I was called to see Miss H. She was expecting confinement, but thought her time not yet out. She was suffering intense headache; face fairly turgid and head throbbing, skin hot, pulse hard and full, urine scant, bowels slightly constipated. Tied up her arm and bled her until the stream ceased of itself; then opened another vein and did likewise, securing in all not over a pint of blood. Gave a full dose of magnes. sulph., which operated freely. She was relieved, went a full month, and was confined by a midwife without an untoward symptom.

Mrs. B., aged 28, third confinement, a woman of strong muscle, a hard worker, full habit, taken in labor at end of her full term. The contractions were very severe, the os rigid, pulse bounding, skin hot, some little headache. The rigid os was the greatest obstacle to free delivery. After four hours of active uterine contraction and the os still unyielding, the arm was tied up, and she was bled until there was a little softening of the pulse, and a little less flushing of the face. Then, almost immediately, dilatation permitted the rapid conclusion of a previously tedious labor.

I well remember an almost fac simile of this case that occurred to me in 1867. The conditions were the same. I had not the courage to bleed the woman. Prejudice was very strong against it, and I was young and timorous. For thirty-six hours the woman continued in active labor (with an unyielding os and perineum), before it was completed. I firmly believe that a free venesection would have set matters right in a little time.

I cannot, by any means, be considered a strenuous and demanding advocate of venesection. But I believe, in properly chosen cases of labor and of threatened eclampsia, and in some cases where eclampsia is already fully developed, it is the very remedy of all others needed. It is to be used as discriminately as we would use any other powerful remedy or means in contest with disease. Never used hap-hazard. Thus brought into requisition it will assume its rightful place in therapy, and be found of great utility.

I reported some of these and similar cases verbally, to a medical society of which I was a member. To my surprise some of the gray heads present thought the treatment was very good, but exceedingly daring for this day and age of anti-depletion. Now, if it was good practice, why call it daring? I had and still condemn myself for not resorting to direct depletion earlier in these cases.

It is certainly to be hoped that, while we should never adopt indiscriminate venesection, as in the past, we may, however, adopt it with that same careful discrimination with which we administer and apply other potent agencies in the treatment of diseases.

—The well known chemical inventor, Jean Wickersheimer, in Berlin, has now invented three fluids, which, while doing no harm whatever to the substances, protect bread, meat and beer against all influences of temperature, weather and atmosphere, for many years.

Hospital Reports.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

CLINIC OF WILLIAM GOODELL, M.D.,

Professor of Clinical Gynecology.

Reported by Wm. H. Morrison, M.D.

STRICTURE OF THE RECTUM—PROLAPSE OF THE WOMB.

Gentlemen:—I had expected to bring before you, to-day, a case of complete laceration of the perineum, but she has disappointed us. Menstruation has kept away one patient and the bad weather has kept away another, so that we shall have to take what we can find.

The first is a woman whom I have not seen. She is 42 years old and has had several children. Her labors have all been of a natural character.

Five years ago she began to have difficulty in defecation. This has gone on from bad to worse, until she now passes her fæces in ribbons and with great difficulty. Dr. Baer has examined the rectum and found a stricture.

While the woman is being etherized let me say a few words in regard to difficulty in defecation.

I received a letter a week ago, from a physician, in reference to a patient who had previously consulted another physician on account of some difficulty in defecation, which commenced some months ago, but as she gained no relief she consulted the gentleman who wrote to me. He told me that on examining her he found what he thought to be a tumor, but whether it was in the substance of the vagina or an outgrowth of the womb he could not say. This tumor, by its pressure on the rectum, caused the difficulty of which she complained. The way he managed the case was by insinuating a rectal tube above the tumor and injecting the rectum in this way. The woman came to my office this morning. I examined her, and felt a tumor through the posterior wall of the vagina. I think that it is a cyst in Douglas' pouch, which has grown from the under surface of the broad ligament, and being unable to ascend, has developed below, and so pressed upon the rectum as to obliterate its canal. I shall aspirate this tumor after the lecture, and expect to find fluid.

Ribbon-like fæces, with mucous casts of the rectum, sometimes occur in bad cases of retroversion. In retroversion the womb is hypertrophied, and is apt to press upon the rectum, obliterating it to a certain extent. We then get ribbon-like fæces, and in addition, these mucous casts of the bowel. These are very interesting, but have not as yet been thoroughly explained. In these cases, supporting the womb, rest, and a building-up, constitutional treatment will usually overcome the trouble. Arsenic, under such circumstances, is very good.

There is another form of obstruction which I wish you to bear in mind. That is, hysterical obstruction. It is very common. I do not know that a month passes without my having such cases on my hands. I will explain it to you. A woman is hysterical; she is nervous; she has spinal irritation; there is an irregular circulation of the blood and nervous fluid. When I am nervous, I blush or I grow pale, through the influence of emotions on my nerves. The hysterical woman, from the condition of her body, mind and cerebro spinal nervous system, blushes and blanches internally. She blushes in her spine, or some other internal organ, and there is too much blood; or (I am carrying out the simile, and it is a good one) she blanches in these organs. As a result of this action we get spasm of the sphincters. If you push me, and want to know how these changes produce contraction of the sphincters, I admit that I do not know. I only know it as a clinical fact, as I know that calomel will cause purging. The best treatment for this condition is a tonic treatment, with rest, massage and electricity; but in the country you cannot fully carry this treatment out, and have to rely upon tonic and neurotic remedies.

There is still another condition in which you have ribbon-like fæces passed, that is, in fissure of the anus. This woman suffers considerable pain, but not enough to lead us to suspect a fissure, which is a common thing in woman, for, as I have often said, where one man has a fissure, ten women will have one, as a result of constipation. These fissures are very irritable, and excite spasmodic contraction of the sphincter, causing the fæces to be passed in ribbons or in little pellets. By the way, in nervous women, in whom there is no apparent sphincteric contraction, fæces will be passed in the form of pellets.

I shall now examine her. I notice, in the first place, that she has a little prolapse of the posterior wall of the vagina. I observe one thing, which is an evidence of a prolonged labor; she has no cervix uteri. She is only forty-two years old, and the cervix is usually not obliterated until much later. In some severe labor the vagina, which is attached about half an inch above the os, has been stripped all the way down to the mouth of the womb, and in this way the cervix disappears. In such cases it is difficult to support the womb with a pessary, as we cannot get behind the neck of the womb. She has also had a bad tear of the perineum, but this has united.

Passing the sound into the cavity of the womb, I obtain a measurement of only 2.5 inches; trying again, I obtain the same result. This is due to the atrophy of the cervix but it is rare; even in old women, to find this condition.

At the mouth of the meatus we have what looks like a small carunculus, but on closer examination it proves to be a polypus.

I shall now examine the rectum. Before making this examination it is always well to rub soap under the nail. I feel the stricture very distinctly, and the question arises, is it syphilitic? is it a result of natural causes, or is it cancerous? As she has had it for five years, it is not at all probable that it is cancerous.

These cases of stricture are very liable to be complicated with recto-vaginal fistula. You would suppose that when a woman had a stricture, with obstruction and great distention of the bowel above, the fistula would be above the

stricture, but this is not the case. In the majority of cases the recto-vaginal fistula occurs below the stricture. This is due to the fact that a small quantity of fæces finds its way through the constriction into the pouch below, sets up irritation, causes ulceration, and we have an opening into the vagina. These are very troublesome. A short time ago, I received a letter from a lady, and to show you how much patients will sometimes blame their physicians, I will tell you about it. This lady's story was that she had a stricture of the rectum. She had been treated for some time, but a recto-vaginal fistula resulted. The only inconvenience it produced was a whistling sound, resembling that made by a toy balloon. Her family physician, not succeeding in closing it (he applied nitric acid and nitrate of silver), she consulted a noted surgeon (she does not mention his name), who made an incision from the fistula through the perineum, but it did not heal up. I cannot find any fault with this, for I did precisely the same thing myself last spring, but fortunately, in my case, the parts healed up, excepting a very trifling fistula. The lady says that the surgeon put no sutures in, and she adds, "you can imagine my horror when, after getting up, I found that I had one vast opening from the vagina into the bowel." She has no control over her bowels, and a constant bearing-down sensation. She has had three different operations performed, but with only partial benefit. The lady may be mistaken in saying that no sutures were put in, for patients will exaggerate. In my case I did put stitches in, and I think it would be wrong not to do so.

What shall I do with this case? I do not know her history, but as many of these cases depend on syphilitic disease, I shall give her a tonic preparation of mercury, which taken for a few weeks, will do no harm. I shall give her minute doses ($\frac{1}{24}$ of a grain) of the bichloride of mercury, and if I find her blood poor, I shall also give her iron, and perhaps arsenic.

If a woman has had venereal disease, and you are certain that the recto-vaginal fistula depends upon that disease, there is no earthly use in attempting to close the fistula until you have expelled the disease (if that can be done) from the system.

I propose to dilate this stricture. What is the danger in dilatation? First, the force employed may be sufficient, in the diseased state of the bowel, to burst through it into the peritoneal cavity. This is a very serious matter, and in the great majority of cases results in death. That is one reason that I do not like to get hold of these cases. The careful introduction of my index finger may cause a rupture of the bowel. Such cases, as I say, usually die. Why? Because the fecal gas, and sometimes the fæces, pass into the peritoneal cavity, causing peritonitis.

The next danger is hemorrhage, so high up as not to be easily controlled. (While I am talking I shall go on and break up some of this mass.) This is not a pleasant complication. Suppose, gentlemen, that I had a bleeding that I could not readily control. I should then use injections of vinegar. I wish you to remember the hæmostatic qualities of vinegar. It is one of the very best in post-partum hemorrhage, because it can always be obtained. It is also excellent in all operations on this part of the body. For instance, you are scraping a cancer of the cervix; the bleeding obscures vision; you inject vinegar and the bleeding is checked.

I must confess that, from my examination, I cannot tell whether or not this is malignant. It certainly looks cancerous. I am going to leave pieces of this here, and ask some of those gentlemen who are investigating these new growths to examine them and give us their report. There is another thing; there is considerable hemorrhage, more than I like to have under the circumstances. This also leads me to suspect that this is malignant.

Suppose you have tried in vain to check the hemorrhage with vinegar. You then try Monsel's solution and it fails. You must bear in mind that you may have bleeding and death, without the apearance of blood externally. After the injections have failed, take a silver female catheter, or an elastic catheter, and tie around it, below the eye of the instrument, a small petticoat, a circular piece of muslin. That forms an umbrella, so to speak. You then pass the catheter into the bowel until the eye gets beyond the stricture. You then pack between the muslin and the catheter, thus expanding the umbrella. The object of the catheter is to allow the gases to escape. After plugging the rectum a set of nervous symptoms appear, and wind is formed very rapidly. If the woman cannot pass the wind the abdomen becomes very much distended, she becomes very uncomfortable, and you have to remove the plug.

I can now pass my finger with ease through this stricture. I shall now wait a few minutes, to see if there is an internal bleeding. If there is I shall stretch the sphincter, have her carefully watched, and if necessary have the rectum plugged.

At one point I have gotten all the way through the bowel. I want to be sure that I have not gotten into the peritoneal cavity. I examine with my finger, but I cannot pass it beyond a certain point. The sound gives the same result. What I feel may be the posterior layer of the peritoneum. There is still one point at which I want to scrape the rectum. I shall do it very carefully, so as not to get into Douglas' pouch anteriorly. I have never yet gotten into the peritoneal cavity while performing this operation, although I am always afraid of it. It is astonishing how easy it sometimes is to burst through the bowel.

If this is malignant (and the fact that I have been able to break it down so easily, and its whole appearance, would indicate that it is) what I have done will be merely of temporary benefit. Having gotten through the friable surface this bleeds less profusely. It is like cancer of the cervix, when you begin to scrape it you have a great deal of bleeding, but if you push on boldly, going down to the firmer tissues below, the bleeding usually stops. I have now a very good opening.

I shall stretch the sphincter a little, so as not to have any accumulation of blood. Now, there is an advantage of her being in the hospital. If this were a private patient I should certainly inject

some astringent, but being in the hospital, where she can be carefully watched, I shall use no injection.

She will now be taken to the ward. We shall give her enough opium to allay the pain.

Prolapse of the Womb.

This is the patient I had before you last Wednesday, and on whom I performed a preliminary operation. I shall not perform the second operation to-day, but shall send her home to recuperate from this operation.

You will remember that it was this unfortunate woman who had a complete prolapse of the organs of generation. The womb was entirely outside of the body. On examining her to-day, it looks as if the womb was still projecting from the vulva, but it is only the posterior wall of the vagina. We are paying attention to that ulceration which you see there. We are using boracic acid on it. Iodoform would do very well, but it makes such an abominable smell. The formula for the ointment which we are using is as follows:

℞.	Pulv. acidi boracici,	ʒij	
	Glycerinæ,	ʒj	
	Vaselinæ,	ʒj.	M.

Ft. ung.

This is a very excellent healing ointment.

The operation I performed last week was upon a tear of the neck of the womb, which was probably the original cause of all the trouble. There was a bilateral laceration of the neck of the womb; this arrested involution; the womb remained larger and contained more blood; having more blood, it was plastic, it could be elongated. There being also a tear of the perineum, the vagina prolapsed, pulling down the bladder and the uterus.

The next operation will be one leading to the support of the womb wholly within the body. I have not decided what operation I shall employ; perhaps the one lately devised by Le Fort.

To-day I intend to remove the stitches. I shall leave two stitches in, to support the parts. The womb has remained up for two reasons: first, it has been, to a slight extent, shortened by the operation, and second, she has been lying on her back for a week.

We shall keep her here until the parts are sufficiently healed, and then send her home to recuperate, for by that time she will have been in the hospital for a considerable period. (The patient was then removed.)

Now, gentlemen, let me tell you the reason why I send her home. I had a very analogous case on which I operated before you three or four weeks ago. I performed at that time the operation for cystocele. I removed an elliptical-shaped piece of the mucous membrane of the anterior wall of the vagina, and brought the edges together. They united perfectly. Two weeks later I restored the perineum, which had been ruptured. That also united perfectly. The very day before I intended to remove the sutures she was suddenly seized with collapse, became cyanotic and had violent dyspnœa. Her condition was explainable only on the supposition of septic poisoning, or of heart clot. The action of the heart was so tumultuous that I could obtain no information from the heart sounds. I then decided the question from the temperature. I said to myself, "if this is septic poisoning, there will be a temperature of 104°, 105° or perhaps 106°." The nurse took her temperature, and found it only 97°. I then took the thermometer and made the observation myself, with the same result. The inference then was that it was a heart clot. Whether the heart clot had been produced by a previous rheumatic condition, whether deposition of fibrin had taken place during two prolonged operations, in which ether was employed, or whether the clots were due to a depressed condition of the blood brought about by a long stay in the hospital, I cannot say; but she died, and I do not wish to put this woman in jeopardy of her life from an operation usually so harmless.

I shall send her home and have her return after the holidays, for the second operation.

Editorial Department.

Periscope.

Chronic Inflammation of the Ovary.

This miserable condition, for the relief of the numerous symptoms and sequelæ of which removal of the ovary has been practiced, has caused this operation to be much discussed pro and con. One of its principal advocates is Mr. Lawson Tait, and he has been much criticised. Therefore, an article by him on the subject, in the *British Medical Journal*, is very opportune. We may have acute or chronic inflammation of the ovary. Acute inflammation is often fatal, and when not fatal it generally leads to a state which makes life-long misery. The acute disease may originate in a simple chill, in a hæmatocele, in an attack of gonorrhœa, in some exanthematic fever, or in miscarriage or child bed. The last two sources are by far the most common. Many cases recover and leave no mischief behind, but in others the permanent mischief gives rise to terrible suffering. The symptoms of the acute form are very vague. Oftentimes a woman will say that since she had smallpox, scarlet fever or acute rheumatism, she has never had her periods as she used to have them. For a time more profuse, they became subsequently scanty and painful, the pain increasing as time went on, lasting sometimes for a week or more in every month, rendering her miserable and relieved only by narcotics. We examine the pelvis and find, perhaps, nothing at all. She has received all kinds of guess treatment, and continues to suffer at intervals till the climacteric period is passed. The chronic form offers more definite symptoms. The majority of these cases occur in primipara, therefore, it is noted that the patient has had one

child soon after marriage, and has never been pregnant since. It uniformly unsexes the sufferer, as far as maternity is concerned. They are rarely free from pain, which is intensified during the menstrual week. There is always pain in the left groin, for if only one ovary is affected it is sure to be the left. In many cases a fixed and tender mass, composed of the enlarged and probably adherent ovary, or of the occluded and distended tube, will be felt on one or both sides of the uterus, through the vaginal *cul-de sac*, and the peculiar sickening pain produced by touching the mass will prove its nature. The treatment is the same as that of inflammation of any other organ. But no treatment is of much avail, according to Mr. Tait, other than the extirpation of the organ. He says:—

"Removal of the inflamed uterine appendages may yet turn out to be a failure for some cases; but it never can be so bad as the removal of an eyeball for cancer; and, in the hands of experienced operators, the operations have quite an equal risk. Besides this, the operation for the removal of the uterine appendages is as yet in its infancy; we have very much to learn about it; yet, in spite of this, in my hands, of thirty-five cases performed for chronic inflammation, there has only been one death, or a mortality of 2.85 per cent—a mortality which, I have some reason to believe, is less than that of excision of the eyeball. This one death was due to causes entirely preventable, and ought not to have occurred. The operation is justified by its primary success; and my belief is that my mortality, as my experience grows, will not be more than one or two per cent.

Precisely the same kind of argument applies to its secondary results, which, in the hands of inexperienced operators, are admittedly bad. For my own results, so far, I have abundant cause for satisfaction; some of my cases are yet incompletely relieved, but by far the majority of them are absolutely cured. The first patient from whom I removed an ovary for pain, nine years and a half ago, was completely relieved of symptoms, and she remains so to this day."

Pseudo-hypertrophic Paralysis in Four Brothers.

Dr. Donald Macphail records these instructive cases in the Glasgow *Medical Journal*. In all the disease commenced at about the same age, when the boys were about six years old. The onset was marked in the very beginning by a shuffling walk, an apparent inability to raise the foot well from the floor in walking, with a liability to trip and fall over trifles. From this slight beginning the cases progressed until, in that of the oldest boy, there is almost complete loss of power of the lower extremities. The appetite and general health keeps good. The muscles are very much wasted.

The mother is aged 46, is strong and well developed, and has "never had an hour's sickness." She has a large circle of relations, among whom such a thing as paralysis or fits of any kind has been unknown.

The father is supposed to be about 55. He is suffering from paralysis of the lower limbs. I have not been able to see much of him, but the history and symptoms, so far as I know them, seem to point rather to "descending sclerosis" of the spinal cord. There is marked rigidity of the lower limbs, a certain degree (increasing) of contraction, and very marked shooting pain and severe twitchings, which often awaken him at night. He is unwilling to admit that the disease has been present for more than twelve and a half years, but his wife states that he halted slightly and tripped easily before their marriage, and that he steadily but very slowly became worse. The progress of the disease seems to have been hastened by a hurt received from a fall of stone in the coal-pit where he worked about twelve years ago. His relations have all been healthy.

There have been nine children in the family, six boys and three girls. Four of the boys are accounted for above. Another boy, aged 16, a miner, has been affected a year and a half with symptoms similar, I am told, to those seen in the father, viz., lameness, most marked in the right leg, slowly increasing stiffness, flashing pains, and marked twitching. I have only seen him once, however, and only for a few seconds. The remaining brother died, aged 9 years, of dropsy and "disease of the bowels." Of the three sisters only one is alive, aged 21 years; she has always been strong and healthy. One was drowned, aged 8 years, and the other died at the age of 4 years, of scarlet fever.

The Amyloid Kidney.

The study of all amyloid degenerations is always an interesting one. Here we have to deal invariably with a known cause, producing the degeneration simultaneously in several organs, and we can follow up the process from its beginning throughout all its stages. Dr. E. Wagner has investigated 265 cases, and published the result of his researches in the *Deutsche Arch. f. Klin. Med.*, xxxiii, p. 416.

The causes which in these 265 cases led to the amyloid degeneration of the kidneys were as follow: phthisis 136; diseases of the bone, not syphilitic 56; syphilis 36; diverse rarer diseases (bronchiectasis, chronic ulcerative skin affections, chronic diseases of the mucous membranes, of the same nature, empyema, pyelitis pyelocystitis, parametritis, psoas abscess, cancer, sarcoma) 36; without detectable cause (no dyspepsia, based upon amyloid degeneration? Ref.) 7. Regarding their morbid anatomy, four different varieties may, according to Wagner, be recognized, possessing also some clinical importance.

(*a*) Amyloid kidney without alteration of the epithelium and the stroma.

(*b*) With fatty degeneration of the epithelium, but uninjured stroma.

(*c*) With fatty degeneration of the epithelium and fresh interstitial alterations.

(*d*) Amyloid-atrophic kidney. This form happens mostly in syphilitic persons, and is caused by amyloid degeneration of a previously atrophic kidney.

In twenty cases, in which the urine had been more or less frequently examined, the latter was

as follows: quantity mostly decreased, rarely normal or increased at the beginning of the disease. Spec. grav. generally 1.012–1.020. Color usually light and clear. Percentage of albumen medium. Sediment sparingly or absent; if present, pale. Tube casts often for days absent, broad forms very rare. Only twice amyloid reaction demonstrable on the tube casts. The latter hyaline or fatty degeneration and frequently covered with white corpuscles. Twice casts with myelin drops; once epithelial casts. In one-fourth of the cases red, in half of them white blood-corpuscles. Mostly sparingly granular detritus.

Dropsy was not an extraordinarily frequent symptom, but when present, remarkably obstinate. Several times uræmic vomiting. Ten times hypertrophy of the left ventricle, but, we suppose, then with atrophy of the kidneys.

Hypertrophy of the Heart.

Dr. Bryan Charles Waller contributes to the *Medical Times and Gazette* a lecture on this subject, from which we extract the most salient points, since it will be well for the physician to have them ever before him. Though a pathological change, in that it involves an appreciable deviation from the normal standard, it is not by any means, of necessity, an unfavorable condition. On the contrary it is traceable, etiologically, in the majority of instances, to a secondary attempt at compensation by augmentation of the *vis a tergo* for some primary lesion involving obstruction to the circulation. Such hypertrophies are by no means confined to the heart. Examples of hypertrophy from constant use are to be seen in the blacksmith's arm, and the well developed calves of mountaineers and ballet dancers.

With respect to the ultimate tissue elements, a hypertrophy may be either simple or numerical. In the former, the size of the original elements is increased, their number remaining constant; in the latter, both size and number are alike augmented.

Rindfleisch believes that the muscular fibres undergo multiplication by a kind of splitting process. If we refer to the normal histology of the myocardium we shall see that the muscular fibres divide and branch, forming a sort of network, composed of thicker strands giving off a number of thinner ones. If we suppose that at the point where a muscular fibre divides, it further cleaves downward from the point of bifurcation, we can easily conceive how a numerical multiplication may be thus affected. This view receives some support from the fact that small longitudinal slits and fissures may be occasionally seen extending downward from the bifurcation, as if the fibres were about to split further. Each one of these fibres might grow to the size of the parent and again bifurcate.

This view is rendered probable by the absence of apparent increase in the diameter of the fibres of hypertrophied hearts, which is affirmed by many observers, and corroborated by the results of my own experience.

Concerning concentric hypertrophy, he considers its existence as a pathological condition, very doubtful, and says: I should accordingly advise you provisionally, and in default of further evidence, to include concentric hypertrophy of the heart in the list of post-mortem changes due to tonic contraction at the moment of death, in which position it becomes fixed by cadaveric rigidity. Though rare, and often not a little puzzling, from an etiological point of view, primary or idiopathic hypertrophy does certainly exist. But far more common than the primary hypertrophies are those which are secondary to some antecedent obstruction or hindrance to the circulation of the blood, or the motions of the heart. Let us again suppose a case of aortic stenosis. Before the development of hypertrophy there will be anæmia in front of the stenosed orifice, that is to say, in the aorta and all the arterial portions of the general systemic circulation. But in addition to this, there will also be mechanical engorgement behind the obstructed orifice. Thus, *firstly*, the left ventricle and auricle; *secondly*, the pulmonary veins, capillaries and arteries; *thirdly*, the right ventricle and auricle, and *fourthly*, the venæ cavæ and their branches, will be engorged with blood which cannot make its way fast enough through the partially closed aortic opening. The blood will stagnate in the lungs, and will no longer undergo thorough aeration. But if the left ventricle now hypertrophies, all these grave conditions will become modified for the better. This cavity will then work double tides; the aortic anæmia will be corrected, and the block behind will be relieved; the blood will no longer stagnate in the lungs; the right ventricle will again possess an unembarrassed outflow; and the engorgement of the great veins will subside.

A second class of intra-cardiac obstructions which are relieved and modified by secondary hypertrophy are those caused by dilatation of a heart-cavity. A cavity thus dilated will be obviously burdened with a greater fluid dead-weight. This state of matters will affect the circulation in much the same way as stenosis of a valvular orifice. The dilated cavity will contain more blood, while its propulsive power is, at the same time, diminished; and arterial anæmia in front, with mechanical engorgement behind, will again result. Hypertrophy of the dilated cavity will render it capable of propelling the additional dead-weight of its fluid contents, and thus the circulatory conditions will again approach their normal standard. Many such dilatations are due, in the first place, to regurgitant valvular disease.

I would have you observe that in obstructive valvular lesions, hypertrophy usually occurs directly, and without intermediate dilatation; while in the regurgitant conditions it almost always follows on a previously developed dilatation. This difference is explicable on the ground that the primary dilatation is principally due to forcible entrance of blood during diastole, while the primary hypertrophy is merely caused by the necessity for overcoming the direct obstruction of stenosis.

Very remarkable examples of eccentric hypertrophy of the ventricle are furnished by those cases where aortic stenosis and insufficiency are co-existent. The insufficiency permits diastolic regurgitation, with consequent dilatation, while

the stenosis prevents complete emptying of the ventricle during systole, until a perfect hypertrophic compensation is established. Thus, before compensation is complete, the ventricle is never entirely empty, either during systole or diastole. The resulting enlargement is often enormous. Such a heart is that which I now show you. The aortic orifice is stenosed, and the valves are incompetent. The left ventricle is greatly hypertrophied, and the heart in its recent state weighed one pound eleven ounces.

Statistics of Amputations.

From an elaborate statistical report of the amputations performed in the Glasgow Royal Infirmary during eight years ending December 31st, 1882 (*Lancet*), we extract the following salient points:—

These statistics show a considerable decrease in the rate of mortality after amputations, for the eight years under consideration, as compared with similar statistics for the previous twenty five years. Thus in the first period the number of amputations was 1412 and the deaths 452, giving a mortality of 32 per cent. In the last eight years the amputations were 726 and the deaths 166, equal to 22.8 per cent., showing a decrease of nearly ten per cent.

The number of primary amputations was 307 and the deaths 98 or 32.3 per cent., against 659 in the previous twenty-five years, with a mortality of 36.5 per cent., a decrease of 4.2 per cent.

	Cases	*Deaths*	*Or*	*Against*	
Shoulder joint..	36	13	36.1	39.3	per cent.
Arm.....	68	14	20.5	33.5	"
Forearm.....	28	2	7.1	11.6	"
Hip joint.....	3	2	66.6	85.7	"
Thigh	47	22	46.8	52.5	"
Leg	42	11	26.2	44.9	"
Ankle joint.....	26	6	23.0	27.5	"
Foot, partial...	7	0	...	20.0	"
Elbow joint.....	1	0	...	50.0	"
Knee joint.....	25	13	52.0	40.0	"
Multiple.....	24	16	66.6	57.0	"

The mortality of the four primary major operations, which are usually referred to as the test of success, was as follows: In 185 cases 49 deaths, or 26.4 as against 35.8 per cent.

The number of secondary amputations after injuries was 81 with 27 deaths, or 33.3 as against 51.7 per cent.

The number of amputations for diseases was 338, the deaths 40, or 11.8 against 21.9 per cent. No special cause could be assigned for this decrease in the rate of mortality.

The Segmental Nature of the Spinal Cord.

The *Lancet* says, editorially, that the spinal cord may be regarded as composed of a series of segments, indicated by the pairs of spinal nerves. According to Lüderitz, this view of its structure is morphologically correct. The spinal cord of the ringed snake shows a slight rounded swelling opposite each pair of nerves, which lies above the junction of the respective vertebræ, and consequently corresponds in height to the middle of a segment. The enlargement is due chiefly to that of the gray substance, but partly also to that of the white and to an increased size of the so-called lateral group of cells. The demarcation between the segments cannot be exactly determined, but they are longer in the middle of the cord and shorter toward the extremities, especially toward the basal portion. Similar segmental swellings are to be discerned in the spinal cord of the rabbit, even on naked-eye examination. Careful microscopical measurements of the areas of the several constituents of the cord in transverse section show an analogy between these elemental segments and the swellings of the cervical and lumbar enlargements. The middle part of each segment, for instance, bears a similar relation to the extremities of each segment when the area of the constituent columns is compared. The increase in size at the middle of each segmental swelling is greater in the transverse than in the antero-posterior diameter. The gray substance is enlarged in all directions, but especially in width. The spinal cord of man, however, presents no segmental swellings, and its elements can only be recognized by the intervals between the series of nerve-roots which arise from it. These intervals are larger between the posterior roots than between the anterior, and they are the greater the longer are the segments, being greatest in the middle and lower dorsal regions.

Sclerotinic Acid.

Sclerotinic acid is a substance without taste or odor, feebly acid and hygrometric, but not deliquescent. It has been obtained from ergot by MM. Dragendorff and Sodevissotzky; good ergot containing about four or four and one-half per cent. of the substance. In their experiments on frogs they found that subcutaneous injection of half a grain caused almost complete paralysis, commencing in the hind limbs; there was no reaction on irritation; the cornea was insensible; from time to time a feeble cardiac contraction was noticed. This state persisted for some days; then there was slow amelioration; finally a fresh attack of paralysis, followed by death.

In 1879 Nikitin published a very complete work on the physiological and therapeutical action of sclerotinic acid.

The principal symptoms observed by experimentation on various animals were paralysis, diminution of blood pressure and of the contractile force of the heart in cold-blooded animals.

In acute poisoning he found diminution of temperature up to the time of death, gradual slowing up of respiration, which underwent complete arrest before the arrest of circulation in fatal cases, and finally augmentation of the peristaltic movements of the intestine. From many experiments, Nikitin concluded that sclerotinic acid induced uterine contractions, whether the organ was gravid or not, and rendered the contractions stronger when they already existed.

As regards the therapeutical action of the substance Nikitin recommends the employment of sclerotinic acid, in the dose of three grains, to produce uterine contraction. He has never observed tetanic contraction of the uterus under its use. The mortal dose in the adult is about one hundred and fifty grains.

Among other observers, opinions regarding the therapeutical value of the drug are widely divergent. Hobert, who first administered it, obtained no beneficial results from strong doses in pulmonary hemorrhage or hemophilia.

Ganguillet found that strong doses (fifteen grains) augmented the duration of uterine contraction during labor; this result was obtained about half an hour after the administration of the drug; he gave the acid in an equal quantity of powdered sugar. Rennert injected the acid subcutaneously and obtained results which he considered inferior to those obtained from the use of ergotin. Professor Prevost, of Geneva, has used this substance in metrorrhagia from fibromatous tumors, and considers it as active, if not more so, than ergotine. Stumpf asserts having obtained good results in various forms of hemorrhage, and recommends the employment of strong doses. The observations are, it must be said, as yet, too few to pronounce definitively on the therapeutical value of the drug.

Reviews and Book Notices.

BOOK NOTICES.

Diseases of the Rectum and Anus. By Charles B. Kelsey, M.D. Wm. Wood & Co. (Library of Standard Medical Authors.)

We consider this to be one of the best numbers of this series. It is a carefully prepared monograph, not twenty or thirty years old, but up to the times and fresh from the hands of the author. He has made himself well acquainted with the literature of the subject, and his own experience has been ample enough to enable him to form an independent judgment when authorities conflict. We have read, for instance, with a great deal of satisfaction, what he says about the disputed point of the value of carbolic injections in piles, and think he expresses the case fairly and on good grounds. So we might add of other subjects, that his conclusions usually impress the reader as fair ones and based on sound observation.

The International Encyclopædia of Surgery. A Systematic Treatise on the Theory and Practice of Surgery. By Authors of various Nations. Edited by John Ashhurst, Jr., M.D., Professor of Clinical Surgery in the University of Pennsylvania. William Wood & Co. Vol. II, p. 754.

The contents of this volume are as follows: "Contusions," by Dr. Hunter McGuire; "Wounds," by Mr. Thomas Bryant; "The Antiseptic Methods of Treating Wounds," by Mr. W. Watson Cheyne; "Poisoned Wounds," by Dr. John H. Packard; "Sabre and Bayonet Wounds," by Dr. J. H. Bill; "Gunshot Wounds," by Dr. P. S. Conner; "The Effects of Heat," by Dr. T. G. Morton;" "The Effects of Cold," by Dr. J. A. Grant;" "Abscesses," by Mr. Howard Marsh; "Ulcers," by the late Dr. John T. Hodgen;" "Gangrene and Gangrenous Diseases," by Dr. E. M. Moore; "Gonorrhœa," by Dr. G. W. White; "The Chancroid," by Dr. F. R. Sturgis; "Syphilis," by Dr. A. Van Harlingen; "Venereal Warts, etc.," by Dr. H. R. Wharton; "Surgical Diseases of the Skin," by Dr. James C. White; "Diseases of the Cellular Tissue," by Dr. Joseph W. Howe; "Injuries and Diseases of the Bursæ," by Dr. Charles B. Nancrede.

The names of these writers are sufficient guarantee that the articles are accurate, that they present the art of surgery as it is understood by the most alert students to-day, and that each topic is discussed as fully as the amount of space permits the writer. At the same time, it is inseparable from this plan of getting up a book, that there should be some exhibition of contradictory theories, and some presentation of personal preferences. Thus Mr. Cheyne's article on the antiseptic method of treating wounds must be pronounced an ardent and narrow defence of Prof. Lister and his method, as if they were the only representatives of the aseptic system. Prof. Halford's ammonia treatment of snake bite certainly merits at least a statement of what it is, but Dr. Packard, in his implied condemnation of it, does not even give it that much attention.

A good share of the volume (from page 324 to page 600) is taken up with the articles on the various venereal diseases. These are all deserving of a great deal of praise, as they are compact, clear and practical.

The articles on gunshot, sabre and bayonet wounds have been prepared after careful inspection of the immense mass of new material collected during our civil war, and also after a study of the extensive collections in the National Medical Museum and Library. They are, therefore, peculiarly complete and authoritative, and present results which, as yet, have not become as well known as they should be.

In Dr. Morton's otherwise satisfactory article on "The Effects of Heat," we felt some surprise that he made no reference to sunstroke. It is quite as appropriate, in a surgical discussion of this subject, as lightning stroke, which he does give.

The editor makes some allusion to the "artistic excellence" of the illustrations, but we candidly confess they disappoint us. As a rule they do not "come up" well. Probably this is due to the printing or to the finish of the paper. There are several lithographic plates, which are only fairly well executed.

THE

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D. G. BRINTON, M.D., EDITOR.

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THE PREVENTION OF EPIDEMICS.

The outbreak of yellow fever at various points along the Gulf Coast, both in Florida and Texas, is a salutary warning how constantly our country is exposed to this terrible scourge. We have no guarantee but that any summer may witness, in New York, Cincinnati or St. Louis, the terrible scenes which history records in Philadelphia in 1793 and 1819, and in Norfolk and Memphis within the memory of all adults. Sanitation does not arrest the progress of this pestilence, nor is altitude a safeguard against it.

It is a permanent menace, and let it once secure a foothold in the populous and filthy slums of the great cities we have just named, and no one of them will escape under a sacrifice of millions of money and tens of thousands of lives.

What is the preventive measure? In spite of all that has been said, we believe in but one—Quarantine. Of course, modern hygienists of a certain school maintain that quarantine is ineffectual, even harmful. But much of the opposition to quarantine arises from its conflicts with "business interests." These interests will at all times cheerfully sacrifice the life of the masses to the greed of the few. These interests are thoroughly selfish, always ready to falsify health returns, always preferring to involve a State rather than endanger their own petty monetary gains.

This is why we have no great faith in the wisdom of Dr. HAMILTON'S recent announcement that, as Chief of the Marine Hospital Service, he would not declare a port in quarantine except with the consent of the local authorities. Perhaps he has no authority to go beyond this. He probably has not. In that case his position is regretable, as he ought to do that which the limitations of his position prevent him doing.

Local boards are not willing to acknowledge the presence of yellow fever until it is a fact too patent to be denied. Then they usually insist that it is of a mild type, and that segregation is needless.

Medical authorities are not always exceptions to this rule. It would be nowise difficult to name recent instances where the presence of contagious diseases in towns and cities has been concealed or denied by medical officers. They offer plausible reasons, as that the public would be needlessly frightened, that business men would suffer, etc.

Such are the difficulties which an effort at efficient prevention must always meet with. The power to declare quarantine ought to be lodged in a strong central body, a federal office, which would act for the good of the whole country, even if it did require heavy sacrifice of some single localities.

CONGRESS AND THE NATIONAL BOARD OF HEALTH.

We wonder whether the time will ever come when the average human being will give evidence of possession of that seemingly rarest of attributes, "*common sense.*" No one, we take it, who belongs, and ought to remain, outside of a lunatic asylum will think of denying the eminent truthfulness of the old saying that "an ounce of prevention is worth more than a pound of cure,"

yet there are comparatively few men who demonstrate by their acts their professed belief in this axiom. The recent action of Congress in cutting down the appropriation to the National Board of Health to such a ridiculous figure that it will hardly suffice to pay office expenses, is one of those seemingly unaccountable acts of man that can only be explained by the assumption that those who thus legislated lack common sense, howsoever brilliant may be their qualifications as statesmen. We fear not contradiction when we make the statement, that of all bodies in this country, the National Board of Health is by far the most important and the most necessary to the material welfare of our country. We know that health is wealth, and we know, equally well, that wealth is useless or valueless without health. The National Board of Health was created to conserve the national health, by preventing the entrance and spread of disease-producing causes; here, in brief, is the object for which this body exists: It cannot fulfill its mission without money, and by this recent congressional act it has been so crippled as to make it almost practically useless. It is impossible to attribute this lack of interest in matters pertaining to sanitation to other than two causes. Either genuine ignorance of the importance of such preventive measures and the wonderful results they are capable of accomplishing, or to a want of common sense among our law makers. We fear the latter is the cause, since no one can, to-day, plead a genuine ignorance of the value of sanitation when the public press, and the medical profession are constantly presenting its importance to him. It has been stated by the Health Commissioner of one of our most prominent cities that this action on the part of Congress has grown out of the "jealousy of New York, whose health authorities are opposed to anything which will cut down the fees of the Health Inspector there, and New Orleans, whose people object to having a national inspector stationed at their port, lest he might tell the truth about yellow fever and so hurt the business of the city." If this charge be true it only goes to prove that those into whose official care is given the health of their neighbors, also lack this great virtue, since they have defeated the very measures that their positions ought to teach them are so very essential to the carrying out of sanitary reforms. It is a crying outrage for our people to allow their representatives in Congress to appropriate foolishly large sums for *great jobs*, and to refuse to make adequate provision for the preservation of the health of the land. The country doctor is usually an authority in his neighborhood in matters political as well as medical. Let us urge such to take some action in this matter. Explain to your patients the necessity and value of an efficient national board to each and every inhabitant of the land. The intelligent ones will be all the more ready to believe what you say, because they will understand that what you are advocating is in reality opposed to your own pecuniary interests, and that you are therefore actuated purely from a sense of duty, from a regard for the obligations that every man owes his neighbor. At election times seek out the delegates to primary and county conventions, and urge upon them to support only such candidates as are willing to pledge themselves firmly to a liberal support of this Board. It is needless, and would be an insult to your intelligence, to tell you how much good can be accomplished by the well-directed action of health boards; but one fact in this connection is so striking as to be worthy of note. One hundred years ago the annual death rate in England was more than eighty per thousand. Health boards and sanitary associations were unknown. Since then well organized sanitary associations have gradually been brought into existence, with the result that the death rate is now only about eighteen per thousand. The *people* of this country are commencing to take an interest in and realize the value of sanitation, and are ready, if directed how so to do, to compel their representatives to so legislate that they may be protected from the inroads and ravages of disease. This instruction should and must emanate from the medical profession. Their teaching prepares them in an especial manner to appreciate what grand results can be achieved in this direction, and if they fail to so inform their patients they

are neglecting a great and paramount duty that is continually staring them in the face.

THE CAUSE OF DEATH.

We know, almost for certain, how death takes place in all fatal diseases; *i. e.*, we say, that an individual dies, either by the brain, heart or lungs. In reality, however, we are still ignorant how death is brought about, how the machinery comes to a sudden stand-still, what extinguishes, with the last flickering of the final expiration, the vital spark forever. The brain may be extirpated, and animal life has been observed to be still going on; the heart may apparently cease beating, and yet the existence of the being is not finally ended; respiration is to all appearances not filling and emptying the air vessels any more, but still more than vegetation keeps up the complicated machinery, the spark of life still lingers.

What, then, is it that finally causes death? Does it not look very much like the sudden action of a powerful poison, which so thoroughly and at once disintegrates the great circulating, life-giving and life-preserving fluid, the blood, that the nerve centres end their existence, and force the organism to cease every motion, like an engine deprived of its steam?

Experiments that have lately been made, and which we have to thank for the discovery of the *Ptomaines*, may tend to lead us a step further in the solving of the question before us. A. Gautiér has made these ptomaines a special study. It has been demonstrated that many organic substances, the fibrin in the blood, the urine, and certain compounds of tissues, when decomposing, give rise to alkaloids—called ptomaines—which are powerful poisons. This discovery we owe mainly to Selmi. But Gautiér has done more. He thought that if such alkaloids are formed on the decomposition of organic substances, why may not, in the course of the common change of tissues, if the latter is deviating from its true course, also such ptomaines be called into existence.

The result of these investigations fully confirmed his theory. A disciple of G. Pouchet succeeded in obtaining from the normal urine a fixed and easily crystallizable alkaloid, the hydrochloric compounds of which crystallize, as well as those with gold chlorid. and platinum chlorid. And this alkaloid has been found to be exceedingly poisonous; in most minute doses it causes stupor, tetanus and death, within the shortest time imaginable, stopping the heart in systole. This very quality relegates this alkaloid of the urine to the ptomaines, for the toxic effect of which the stoppage of the heart in systole is most characteristic. A mixture of ferrum-chlorid. and ferro-cyanide of potassium colors this alkaloid blue, as it does all ptomaines. Gautiér was able to isolate from the poison of two poisonous snakes (Trigorrocephalus and Naja) two similar alkaloids.

Gautiér proved also the intensely poisonous action of the human saliva on birds. He evaporated twenty grms. of saliva in the water bath, dried the 0.25 grm., weighing residue, and dissolved it in warm water. This solution injected into a small bird, under the skin, caused stupor, dilatation of the pupil, increased frequency of respiration, and in all cases, death. He was able to isolate an alkaloid also out of the human saliva. This alkaloid gave the same color reaction as the other ptomaines.

Another characteristic quality of these ptomaines is, that they form salts with most of the vegetable alkaloids, as morphia, codeia, atropia, veratria, aconitia, hyoscyamia, eserin, and others. The ptomaines are very easily oxidizable, and may be formed during the normal change of tissues, even without the presence of oxygen.

What may all these investigations, and their astonishing results, not explain? If a hypodermic injection of some vegetable alkaloid accidentally is made into a larger vein, and a fatal result the consequence, under all the symptoms which we used to ascribe to the entrance of air, may not the real cause of death be found, perhaps, in the sudden formation of these poisonous animal alkaloids? May not many other similar occurrences, which to-day are clouded in mystery as yet, find a similar interpretation? May not, at the time of the dissolution of the body, a similar

process turn out forever the flame of life? Is it urea, in uræmia, that causes the fatal uræmic symptoms, or does the presence of urea in certain quantities, and under given conditions, produce the formation of these highly poisonous animal alkaloids?

The subject is one of great interest to the medical profession. We mentioned in one of our late numbers, when speaking of the pure keratin prepared from the eggshell-membrane, and its easy transformation into leucin and tyrosin, the "multum e parvo" of nature, and here we have a still more glaring proof, with what few means nature—as with the magic touch of the mystic wand—achieves the greatest results.

THE DARK AND LIGHT AGES.

One cannot read the addresses delivered at the recent meeting of the British Medical Association, without realizing how dark must have been the age of medicine fifty years ago, when viewed from and contrasted with the almost dazzling brilliance of the present age of enlightenment and progress. The past fifty years have been, so far as we know, unprecedented in the medical history of the world, for wonderful progress, undreamed-of achievements and most beneficent developments. It is true that many of the arts of to day are, as Wendell Phillips so beautifully tells us in his famous lecture on the "Lost Arts," but revivals of the realities of bygone ages, and that many accomplishments familiar to our far-back ancestry seem to us but as the mythical impossibilities of a wonderful imagination. Viewed from this standpoint it might seem possible that some ages long past have been equally favored with the comprehensive knowledge that goes to make up the science of medicine that is vouchsafed to us of to-day. But when we remember that we have absolutely no record whatsoever of any such state of knowledge, we are perforce compelled to believe that in our science the present age is by far the best informed and the most progressive in the world's calendar.

Again, it would seem, in the light of the developments of the last half century, that during that period more real progress has been made than in all the many years that had elapsed before. True, isolated discoveries of signal importance have been from time to time made public and proven by experience, but in no other period of medical history have so many and so various additions been made to our knowledge. Every branch of our science has advanced with the most rapid strides. Physiology, histology, pathology, diagnosis, therapeutics, all, indeed, seem as though they had only been heard of fifty years ago, so much do we know now, and so little (comparatively) did our fathers then know. Operations commonly performed to-day would have seemed to them but little short of murder. This progress is but a part of the general march of the world in all scientific pursuits, which has rendered this century a notable one. In this general march any one can have a part, and all should take an active interest. Remember that the life of man has a limit, and that while a large corps of unusually intelligent investigators are now busily employed in unraveling the hidden mysteries of the normal and pathological life of man, the time will come when the dreaded hand of death will summon these men from their earthly labors. If their places are not filled by equally capable men, science will suffer, the dark age will gradually steal back upon us, we will lapse into stagnation, and all that has been gained by the lifelong labors of these grand men will be practically lost, insomuch as it will not be utilized to teach us more. Therefore every one who can (and this means absolutely every one) should constitute himself an investigator. He should cultivate the habit of minute and constant observation, should remember and reason upon that which he observes, and when he has reached some practical result from his meditation, make it known. We must all help to keep rolling this mammoth ball of progress; each must contribute his mite toward the lever that will ultimately succeed in lifting and firmly planting our science on the solid and impregnable foundation of an *exact* science. Remember that many of the greatest discoveries in medicine have been made by country physicians; so let those who imagine

that their country residence debars them from the advantages of experience and observation enjoyed by their urban confrères, disabuse themselves of this erroneous idea, and taking courage from these few words, set to work, each one determined to add his quota to this general, universal medical progress.

PARENTAL GOVERNMENT.

How providential the care is which the Prussian government takes of its subjects, may be guessed from the following: As is well known, in Berlin, as well as in other great cities on the continent, there exists horse-slaughtering houses. The meat is sold to be eaten by persons who may like it, or who buy it because it is cheaper; and it is also mainly made use of to feed dogs. But to prevent any unhealthy meat being sold, and to be able to follow up any possible infection or to detect any infringements, as well as to protect its citizens, the Government has established the following law, of which we make a short extract:—

SEC. 1. The slaughtering of horses or asses, for the purpose of the sale of the flesh of these animals can only be performed in special slaughtering-houses, specially licensed for the same.

SEC. 2. The sale of the flesh of these animals can only be carried on at such places as previously have been indicated to the police authorities.

Every place of this kind must be provided with a large sign, on which may be read, in large and legible letters, the words, "Sale of horse flesh." Other meats cannot be sold at such places, only the flesh of horses and asses.

SEC. 3. No horse and no ass can be slaughtered, till the animal has been re-examined by a veterinary surgeon permitted to make such legal examination.

The animal has to be slaughtered on the day it has been examined. Its flesh cannot be exposed for sale till the veterinary surgeon, after having examined the split head and the lungs of the animal, has entered his permission into the butcher-book.

SEC. 4. Every horse butcher has to keep a butcher-book, which must be approved by the police authorities and be arranged as follows:—

1. Current number.
2. Description of the animal, its sex, age, size, color, weight and special remarks.
3. Day of its purchase.
4. Name of seller and remark on his standing.
5. Veterinary surgeon's certificate of the health of the animal.
6. Day of slaughtering.
7. Permission of the veterinary surgeon, fer the sale of the meat.

The rubrics 5, 6, and 7, are filled out by the veterinary surgeon.

SEC. 5. It is forbidden to buy such animals from unknown persons not legally authorized to sell the animal. How the person selling the animal has proven his identity and his standing, has to be remarked under 4.

SEC. 6. Before such flesh can be imported the special police permit must be asked for and obtained.

If horse butchers buy such meat of others in the same trade, the police authority has to enter in the butcher-book the weight, and the number of the other book, and to add the permit given, in writing.

SEC. 7. Infringements are punishable by a fine of $20, or imprisonment for four weeks.

It would be well, for the health of our citizens, if our government would become equally parental in the sale of cattle, etc.

PNEUMONIA AN INFECTIOUS DISEASE.

That acute, lobar, croupous pneumonia is considered by some an infectious fever, with evident tendency to the lungs, or as now better expressed, a zymotic disease, caused by the inhalation of bacilli, which accumulate mostly in a lower lobe of one lung, we have often had occasion to note. The proofs of this statement accumulate daily.

Dr. KÖHNHORN found that the disease had become endemic in one of the barracks at Wisel. Occasionally it broke out as a local epidemic. The regiment stationed there had suffered frequently from the disease. Not a year passed without many falling a victim to pneumonia. The regiment was then placed in other quarters, and no further case happened in this regiment. The barracks were torn down, the soil disinfected most thoroughly, as also all the building material. Since the regiment has been camping in these rebuilt barracks not a solitary case of pneumonia has made its appearance.

Notes and Comments.

Phlegmasia Alba Dolens.

To the St. Louis *Courier of Medicine*, Dr. P. V. Schenck contributes a lengthy article on this subject. After reviewing the various opinions that have at different times been advocated concerning its etiology, and leaving the matter in as much doubt as ever, he comes down to treatment, in which we find the following practical suggestion: "There is no doubt that bandages aid the absorption of the effusion, and diminish the size of the limb, and the advisability of this treatment is no longer questioned. The only point is when to use it, and how to apply the pressure, and what material to use. The fresh skin of animals was once used, and it was supposed to possess a certain advantage outside of the mere pressure. Next muslin was tried, then flannels, then chamois skins were applied, then silk in the shape of long elastic stockings; but my experience has been so favorable in the use of Martin's rubber bandages that I think it worth while to call the attention of the profession to their application. The use of these bandages has become almost universal; there is no need of describing their mode of application, every surgeon applies them, the general practitioner employs them, and the obstetrician and gynecologist are now trying them, as a utero-abdominal supporter.

The Radical Cure of Varicocele.

In the *Deutsche Medic. Zeitung*, III, 16, '82, we find a description of a method of operation which has proven very successful for the cure of varicocele in the hands of Dr. Reg. Harrison, of Liverpool. The operation recommends itself by the fact that recurrences after this method have not been observed.

The procedure is as follows: After the cord has been laid bare by a vertical incision of about one inch in length, those varicose veins which appear especially prominent are, each by itself, ligated with a catgut ligature (usually 3 to 4). The smaller veins, which generally are met with in different numbers and in form of plexus or bundles, especially in the neighborhood of the epididymis, are destroyed with a few light touches of the thermo-cautery, while the vas deferens is held between thumb and forefinger of the left hand and carefully protected against any injury. This permanent destruction of the small veins is essential, as in this way alone any recurrence can be prevented. During and after the operation perfect antiseptic treatment, and no suture. The cicatrix formed by granulation looks well and is contractile.

The very old method of removing a piece of the scrotum, as practiced by Dr. Henry in New York, and Dr. Levis in Philadelphia, is not thought well of by Dr. Harrison.

Ligature of the Innominate Artery.

Mr. Thompson's patient, an account of whom has already been given (see Reporter, August 5th, 1882), died July 20th, the forty-second day after ligature of the innominate artery. There was no recurrence of bleeding after the thirty-ninth day. The sinus was found to terminate in an ulcer, which involved the anterior wall of the junction of the innominate, carotid, and subclavian arteries. The innominate and carotid were filled with clot; the subclavian contained a clot occluding it to the extent of half an inch. The position of the ulcer was on the distal side of the ligature, the constricted portion of the innominate not being involved. The hemorrhage had apparently taken place from the innominate, as there was a recent blood-stain on the cardiac side of the clot. None of the vessels were pervious to water forced in with a syringe. The aorta was atheromatous. Consolidation was proceeding satisfactorily in the tumor. Excluding the successful case of Dr. Smith, of New Orleans, this is the second longest survival on record; Graefe's case having reached the sixty-seventh day, and Cooper's the thirty-fourth.

Isolation in Contagious Diseases.

At a recent meeting of the Académie de Médecine, M. Hillairet read a report prepared in answer to a question asked by the Minister of Public Instruction, regarding the length of time a pupil affected with any of the contagious diseases should remain separated from the other pupils. M. Hillairet's report may be summed up in the following propositions: 1st. Pupils suffering from varicella, smallpox, measles, mumps or diphtheria should be completely isolated and hold absolutely no communication with the other members of the school. 2d. Isolation should continue forty days for smallpox, measles, scarlatina and diphtheria; twenty-five days for varicella and mumps; the patient should have repeated baths before being allowed to join his comrades. 3d. The clothes worn by the patient at the time he fell sick should be submitted to a heat of 90° C., and then to repeated fumigations

of sulphur. 4th. The bed-clothes, curtains, carpets, furniture, and even the walls of the room occupied, should be carefully disinfected, washed and aired. 5th. If the pupil is taken sick at home he should not be allowed to return to school without the certificate of a physician attesting that all these precautions have been faithfully carried out.

Ether.

In the *Lancet*, Dr. H. Bendelack Hewetson discusses the relative value of ether when prepared with "rectified" or "methylated" spirits of wine. The author states that there is a great difference between them. That prepared with rectified spirits has been found by those who have used it less safe and less desirable, producing more sickness and laryngeal spasm in certain cases in which there is a tendency to such complications. Of the use and applicability of the methylated ether—as the safest anæsthetic known, when carefully administered by means of Clover's inhaler—he can speak strongly, as the result of daily observation. It is a very ordinary circumstance to occupy eighty seconds in producing complete anæsthesia, without a struggle or a cough, and it is by no means extraordinary for a patient to be "fully under" *within* the minute. In the case of short operations upon the eyes, and the like, it is hardly ever necessary to reapply the inhaler after it has been once removed for the operator to commence, the patient remaining sufficiently anæsthetic for an operation such as mentioned to be completed without hurry. Anæsthesia can be prolonged with equal safety even so far as to keep a patient in labor completely under its influence for upward of *four hours*, the longest time which has happened in my experience. Methylated ether is, I consider, from this point of view, the safest and cheapest anæsthetic at present in use.

Retroflexions of the Uterus and Painful Menstruation.

At a recent meeting of the Obstetrical Society of Dublin (*British Med. Jour.*), Dr. Hermann read a paper on the above subject. He discussed at some length the influence of retroflexion in producing difficult menstruation, and offered the following conclusions:—

That while dysmenorrhœa accompanying retroflexion is often, it may be generally, dependent upon other concomitant conditions, yet there are cases in which it is simply the result of the displacement; and that in such the dysmenorrhœa is probably entirely due, not to the flexion, but to the veins of the broad ligaments being compressed against the utero-sacral ligaments.

He said it was impossible to avoid reasoning from pain; and he thought that, by taking a large number of cases, errors due to the incorrect statements of a few individual patients became neutralized. He did not think that the cases in which the utero-sacral ligaments caused congestion of the uterus were more than a small minority.

Permanganate of Potash, in Gonorrhœa.

Prof. Zeissl, of Vienna, recalling the accidents which may result through the employment of caustic injections in the treatment of gonorrhœa, stated that he had observed in the Vienna Hospital a number of cases of stricture, which he considered due to the employment of too concentrated a solution of permanganate of potash. This method is, it may be said, at the present time, à la mode with the physicians of Vienna.

The good effects obtained from it in the treatment of gonorrhœa cannot be denied, but Prof. Zeissl affirms that the employment of a weak solution is without caustic effect, and yet possesses sufficient astringency to obtain the desired effect. This he has proven in many cases with the following solution:—

℞. Potass. permanganat., gr. ½
Aquæ, ℥ ij. M.

The Elastic Ligature for Opening Sinuses.

In the *Medical Times and Gazette*, Dr. Henry A. Lediard recommends the use of a fine rubber ligature in opening up sinuses about the posterior part of the mouth. He relates the case of a patient with several sinuses in and about the soft palate on the right side, and in the neighborhood of the tonsil, resulting from repeated abscesses of long duration. A scanty purulent discharge was always present, causing a disagreeable taste in the mouth in the morning. A considerable amount of cicatricial tissue was present near the right tonsil and about the soft palate. A probe searching behind the velum found its way into a sinus, and the point of it projected the tissue above the last molar tooth. He cut down upon the probe-point with a view to establish complete drainage through the incision, which, although very small, caused a lingering hemorrhage, which was not checked without trouble. In order to find the course of the pus, which still appeared, he passed some fine elastic, tied to a thread upon

an aneurism needle, through the track above mentioned, and tied it; in forty-eight hours the tissues were cut through, and a sinus laid open. No hemorrhage and only bearable pain resulted. The effect was beneficial, but other sinuses appeared still, behind, in parts considerably altered by the old inflammatory action. He accordingly repeated the process, passing the ligature partly through a blind sinus, and bringing it out through healthy parts; and this was done altogether three times, with the result of complete cure.

Perforation of a Gastric Ulcer into the Left Ventricle of the Heart.

This peculiar condition was detected in the case of a laboring woman, aged 55, who died with the symptoms of a perforating ulcer of the stomach. During life the remarkably irregular action of the heart had been noted, but found its explanation only after death, in the lesion of the muscle of the heart. There existed, besides, a left-sided pleuritis, caused by the ulcer. This pleuritis had produced adhesion of the diaphragmatic pleura to the pericardium. In consequence of this the base of the ulcer had been brought in direct contact with the pericardium, and so caused a perforating ulcer of the left ventricle of the heart. The seat of the ulcer in the stomach was distant five ctm. from the cardia, and situated in the lesser curvature.

Accidental Removal of Uterus—Recovery.

At a recent meeting of the Obstetrical Society of London (*Amer. Jour. of Obstet.*) Mr. Hopkins Walters exhibited a uterus with one ovary and Fallopian tube, and a piece of omentum that had been torn away by a midwife in the attempt to remove an adherent placenta. The patient made an excellent recovery.

Hemorrhagic Polypus.

At a recent meeting of the Obstetrical Society of Dublin, Dr. Henry showed a tumor (*British Med. Jour.*) which had been expelled from the uterus of a woman on the previous day. In March last she menstruated normally, but her period did not appear in April. In May, at the menstrual period, she felt something moist come away, and then a gush of blood followed. In June she expelled a three months' fœtus, and on June 30th the mass now shown came away, it having been previously felt in the uterus. The tumor consisted apparently of blood-clot, to which remained attached the membranes, placenta, and cord of the fœtus, expelled eight days before. It was thought the case was one of what had been called "hemorrhagic polypus."

Meniere's Disease.

The following case from the *British Medical Journal* well illustrates the necessity of caution on the part of the public in forming opinions on matters relating to medicine: On the 21st of last October a court of inquiry was held to inquire into a charge of drunkenness preferred against a sub-constable. He had been seen to stagger and reel while on duty. He was taken to the barracks, where, in a short time, the transient attack of giddiness having passed away, he seemed, as he really was, perfectly sober. He was seen two hours afterwards by Dr. John Ringwood, when he exhibited well marked symptoms of Menière's disease; noise and hissing in his left ear, numbness behind the ears and down the left arm, depression, occasional vomiting, giddiness, objects going to the left side, the drum of the ear inflamed, and the left Eustachian tube plugged. Improvement followed inflation with the Eustachian catheter.

Butternut as a Preventive Remedy in Abortion.

Dr. Bell Morrelton reports (*France Médicale*) several cases in which the extract of butternut (juglans cinerea) seemed really efficacious in preventing abortion.

He employs the following mixture:—

R.	Ext. hyoscyam.,	ʒj
	Ext. juglans cinerea,	ʒj
	Ol. sassafras,	ʒss
	Sodæ bicarb.,	ʒss
	Syr. simplicis,	ʒvj. M.

A teaspoonful of this mixture may be administered three times daily during the entire period of pregnancy, after the threatened abortion.

The same physician has also employed this remedy in scrofulous affections and as an injection in leucorrhœa.

Deaths of Children from Syphilis.

The *British Medical Journal* notes that during the past eight years as many as seventy eight children have died in Sunderland, from syphilis. This is according to statistics, but it points out the fact that this can hardly represent the true mortality, since medical men, in giving certificates of death, could not, in many cases, state syphilis as a cause, lest by so doing they would cause much domestic misery.

Œsophagotomy.

The *Lancet* notes that the œsophagus has been recently opened in London, by Dr. Stephen Mackenzie, for cancer, in the case of a man sixty years of age. The walls of the œsophagus were so cancerous that it was difficult to recognize it, and they were so friable that the attempt to secure it to the skin was abandoned and a large elastic catheter was introduced and tied in. This operation is of value in so far as it tends to dispel the hitherto generally accepted belief as to the danger and difficulty of the operation when undertaken for stricture. A full report of the case will be given when all the details are complete.

Cause of Red Sweat.

That blue sweat was due to micro-organisms, and that the latter are found even in yellow sweat, has long been known. Babesin reports to the *Ctrlb. f. d. Med. Wiss.*, that he has been able to detect bacteriæ in red sweat, and especially in the hairs of the armpit of such a case. He considers these bacteriæ to belong to the same class as all chromogenic bacteriæ, being very much like the bacterium prodigiosum. They are easily destroyed by disinfecting solutions of proper strength.

Treatment of Styes.

As a means of "backing" a stye, Dr. J. P. McGee, of Tennessee, states that the practitioner can use to advantage the following treatment:—

℞. Fl. ext. belladonnæ, gtt. iij
Aquæ pluv., ℥ ij. M.
Sig.—A teaspoonful every hour.

At the same time he may give calcium sulphide, ½ or $\frac{1}{10}$ gr. every hour, for five or six doses, then every three; although the belladonna is often sufficient alone. Remember, this is sufficient only in the very early stage of the affection—within the first six or twelve hours. He will find it "back" at least three of the five.

Suture of Tendon.

Dr. Yeats recently presented a case to the Manchester Medical Society (*British Medical Journal*) where he had, six weeks after an accident, united with four catgut sutures the divided ends of the tendon of the extensor communis digitorum of the middle finger, at the metacarpophalangeal joint. The skin wound was united by silver sutures. The operation was done antiseptically. The wound healed in four days; and three weeks afterward the patient had perfect control over his fingers, flexion and extension being perfect. At the end of five months the fingers were as strong and useful as before the operation.

Pasteur's Inoculation Questioned.

The *Medical Times and Gazette*, quoting from the *Revue Med.*, says: M. Duclaux, Professor at the Agronomic Institute, and charged with the delivery of a course on Chemical Biology, at the Sorbonne, has devoted a chapter of his work, "Ferments et Maladies," to the consideration of M. Pasteur's inoculations. We know that M. Pasteur takes a virus, cultivates it under determinate conditions which are still kept secret, and professes to transform it into a "vaccine" virus, which, when inoculated, preserves an animal from a disease caused by this same virus when not attenuated. We are of opinion that he does nothing else than the practitioners of former times did when they inoculated smallpox, and which those of our contemporaries have so unfortunately done in inoculating syphilis, with the object of preserving from diseases that can only be taken once. Three circumstances may occur—1. The animal inoculated is not favorably disposed for the infection, the virus does not take, and there is no result; 2. The virus takes and a slight form of the disease is produced, which preserves from an ulterior attack; 3. The virus communicates a dangerous form of the disease, and the animal dies. This last case occurs pretty often after the vaccination by the Pasteurian procedure, and perhaps not a week passes in which carcases are not received at Alfort that have had no other cause of death. There is no analogy whatever between the Jennerian vaccine virus employed for prevention against the smallpox and the *virus-vaccin* used by M. Pasteur. Never has vaccination given rise to the production of variola; and variola and vaccinia have been observed in a state of simultaneous evolution in the same individual. Never has vaccination caused death, except when the virus has been mixed with virulent pus; while this *virus-vaccin* has already killed a number of animals. What number? This should be stated in a matter of such importance.

Such accusations should have strong authority to substantiate them, else they had better be left unmade.

—Professor Kundral has been appointed successor of the celebrated Heschl at the University in Vienna.

Correspondence.

Veratrum Viride in Puerperal Convulsions.

Ed. Med. and Surg. Reporter:—

On Friday, April 30, 1880, I was called to see a colored woman, aged about 19 years. Found her in convulsions, which were quieted in a few moments by the inhalation of ether, and by 5 minims of tinct. verat. viride (Norwood's), subcutaneously. After she became quiet the husband informed me that she had been suffering with great pain for several hours, which gradually became worse; about one and a half hours before I saw her she had her first spasm; her fifth was the first I saw the patient in. It was the most severe.

This patient was well advanced in labor. I found the os dilated well; head in the first natural position (acccording to Miller, left occipito acetabular). Labor progressed very slowly, uterine contractions being feeble, and after waiting half an hour found the womb still inert. I decided to excite the action of that organ. I injected, hypodermically, 10 minims of ergotine and 5 minims of tinct. verat. viride combined. I used the latter for fear of a return of the spasm, which did occur as soon as the uterus became active. During this spasm the membranes ruptured spontaneously, a ten-pound male child was born, and twenty minutes after placenta, etc., were taken away.

I waited the usual "hour;" finding no recurrence of convulsions, nor any flooding, I left her doing well. What the convulsions were due to, I think, was her condition; she having suffered several months from malarial fevers, which had nearly exhausted her strength, she became anæmic.

When I first saw her she was suffering great pain from œdema of the lower extremities. Her face was swollen to almost disfiguration. Strange to say, the patient's urine showed but a small quantity of albumen on the proper test for same.

By means of the "tonic and suppurative treatment" my patient made a good but slow recovery. The reason I report this case is, that I have had the opportunity of treating some cases before, and have had several since this one, with equal success (except one), with verat. viride.

I intend to use this remedy whenever a case presents itself, and hope those of the *regular* profession who have not tried it, under the circumstances above mentioned, will give it a fair test.

Do not wait to give the remedy by the mouth, but give it hypodermically.

Natchitoches, La. W. B. Powell, M.D.

News and Miscellany.

British Medical Association—Meetings of Sections.

SECTION OF MEDICINE.

The address in the Section of Medicine was delivered by Dr. T. Clifford Allbutt, who chose the subject, "*Modern Freedom of Thought and its Influence on the Progress of Medicine.*" He said, what is that spirit, which, in this century, has expanded and transfigured our art? It is not the new power of unity alone, that strange, new function which is bred in gatherings of men, a thing higher and other than the mere addition of individual faculties; this union the press and the railways have made possible; but there is that something more, some masterful expansion which has widened the life and nerved the arm of modern science. This comes, gentlemen, of the gift, without which all other gifts are but as apples of the Dead Sea, the gift of freedom. The withes whereby, for a thousand years, men were bound in body and soul, are broken; the dissolution of that tyranny which stalked, halted and baited the man who dared to think for himself, is fulfilled in our own time, and no longer is it declared to men, "Thus, and thus only, shalt thou think of God and Nature." Man has won three victories; he has vanquished the terrors of the old world, brought forth food, warmth and light upon the face of it, and thus ceased to be Caliban, the earth slave. Then man became a nation; nations strove for the mastery and political freedom; his second victory was won. Lastly, with the earth his servant and his civil rights secured, the final and crowning work remained, to win the freedom of his mind.

As men more and more deeply studied the life around them, they found themselves led into new realms of experience, and to conceptions far wider than they had dreamed of. At last the old and binding idea of force and matter as dual, was seen to be factitious, and most mischievous in this, that it divided the faculty of thought into two worlds—into the several worlds of philosophy and of natural history. The former was to be regarded as the higher and chosen sphere of noble contemplation, though, uncoupled with nature, it brought forth nothing; and the latter had the sterility of neglect. We now see once more that this dualism is a phantom, and that force and matter are but one subject under two names. Natural processes are no longer to be regarded as the work of inert atoms, whipped by tangential agents; nature herself is no longer to be studied as a mere framework, pumped by a vital principle, which is itself the nobler object of pursuit, but which submits not to a like study, eluding inquiry or subject to a special and alien kind of illumination.

But when we have learned that matter and force are one, that atoms are force-dust, and that we are in the presence of infinity in either sense, inward or outward, then we know that the soul may be kindled and the mind fed by depth of penetration as richly as by the loftiest aspirations. As Browning tells us, in Paracelsus, "to know rather consists in opening out a way whence the imprisoned splendor may escape, than in effecting entry for a light supposed to be without." The very terms materialism and idealism thus cease to signify an opposition, and fall meaningless to the ground, and the microscope is seen to be as true a source of inspiration as the *Paradise Lost.* No longer, then, thrust back from scientific progress by the reverence of antiquity and the authority of those of high repute in philosophy, which have held generations of men as by an enchantment, we have now, in the last fifty years, seized upon the real strong-

hold of truth, and have added to the riches of the knowledge both of universe and mind, in a measure unexampled in the former history of man. We have won that freedom for our great workers and thinkers, which gives them power to speak and spread forth their doctrines openly.

Till these studies are more complete, and as yet they have scarcely begun, we cannot hope for a system of medicine, but must content ourselves with a mere *corpus prescriptionum*. Toward this higher phase of our own art let us strive. Until we can eliminate the chief morbid factors which affect us from without we cannot understand our failures from within. In his treatise on "Airs, Waters and Places," Hippocrates laid the foundations of the study of the external factors of life; it has been left to our own day, and to such men as Pasteur, Lister and others, to advance this research from the study of the inorganic factors to that of the organic. Another great and curious department of knowledge has been opened out to us in the embryological interpretations of the phenomena of disease; these being traced either in arrested development, as in many defects and deformities of body and mind, or in retrogression, such as leucocythemia. The comparison of embryonic periods in the same and in different animals may be the master-key even to the diatheses themselves, as may be suggested, for instance, in the chief functional disorder of lithiasis, wherein the formation of urates in place of urea is the resumption of a state normal to inferior types. The strumous diathesis, again, is, it would seem, a permanent arrest of development at a stage short of the highest, and may indeed be, and commonly is, artificially attained by exposure to conditions such as deprivation of light, etc., acting in arrest of completion of growth, as we know that they do in the case of the lower forms of life. The later work of our histologists is full of suggestions of this kind, drawn from the study of heterogeneous growths. Many great lines of thought and observation are thus convergent upon the study of medicine, and are enlarging the foundations of the science, upon which alone the successful art can be reared. What we have then to-day to proclaim is, that during the last half century we have ceased to build castles in the air, have turned more frankly and loyally to nature, and have sought our inspiration and found our reward in the study of phenomena which our forefathers despised as gross and immaterial. As did anatomy, two hundred years ago, so in our own time, has medicine conquered her independence; for this other men have labored, and we are entering into their labors. And although our ways be still dark and slippery, I trust that those who shall be gathered together in our hundredth *Comitia Tributa* may rejoice in a yet more glorious light, and may think gratefully of us of to-day, for in the words of a modern poet—

> "The first still follows one that goes before;
> The last still hears a toiling foot behind."

SECTION OF SURGERY.

In this section the address was delivered by Augustin Prichard, F.R.C.S. After some preliminary remarks, he touched upon the difficulty which existed but a few years ago, comparatively, in procuring an adequate supply of material for dissection. It was but a few years after the passage of the Anatomy Act, an uncle of mine, a very promising young man, died of disease of the chest, the effects of cold caught by being locked up with a fellow student half the night, in a damp cell, in his wet clothes, having been caught while out on an expedition such as I refer to. These events were long ago, it is true; but we can hardly admire sufficiently the zeal, born of necessity, which took these young fellows out after the work and amusements of the day was over, at the smallest hours of the morning, dressed as laborers, and armed with lantern, shovel and pickaxe, to some dark churchyard, then dig open the newly-filled grave, get out the body, and drive it home in their gig before the town was astir. A late colleague of mine, who taught anatomy in Bristol, under these difficulties, in what some of you may consider prehistoric times, has, before now, shown me a heavy bunch of huge keys, all ticketed, which were duplicates that unlocked all the churchyards of Bristol and its neighborhood. Some few of the stories connected with these events have been published from time to time, in Sir Astley Cooper's life, for example; but there are members of our profession still living who shared in these dangers and difficulties, and it would be well worth while if some one would collect some authentic account of these doings, before the whole generation passes away, and before they come to be considered an incredible and impossible part of our professional history; and to make this suggestion is one of my reasons for touching on the subject.

After deprecating the undeserved and unwise neglect of venesection in appropriate cases, which obtains to day, the speaker touched upon counter-irritation, which he considers a most important means of treating chronic disorders.

We are now taught to look with suspicion, if not with dread, on a drop of pus; our predecessors called it laudable; and in my time numerous and ingenious were the devices to produce a suppurating surface. I have no wish to defend the treatment, such as I saw formerly, when Dieffenbach and Jüngken, at Berlin, and Velpeau and Roux, at Paris, after an amputation, would fill the stump between the flaps of skin with dry charpie, before bringing them together with bandages, to ensure a good suppurating surface. The mortality after these amputations was a sufficient warning against the plan; but for chronic joint disease, for chronic eye disease of various forms, especially the chronic inflammation of the cornea, for chronic inflammation of the middle ear, and I believe, for a very much larger number of chronic internal maladies in the domain of the physician, a seton or issue, or some other discreet mode of counter-irritation, is of the greatest service, and not nearly often enough used.

Some good operations have been dropped into disuse on account of fashion or some other equally irrational cause. Some such inadequate cause no doubt first started the growth of the great medical imposture, homœopathy, which has attained such a development among us; and although it has invaded the territory of the phy-

sician much more than ours, I nevertheless think that it has had the effect, in some degree, of discouraging, or diverting into the wrong channel, the search for pathological truth.

Before the time of anæsthetics, operations were performed with great rapidity. I think that I have noticed, as far as my opportunities go, a tendency to greater deliberation and slowness of procedure in operating; and this I hold to be a mistake, for I am convinced that the shorter the time that the patient is under the influence of an anæsthetic, and in the hands of the operator, the better.

There is an operation which, after resuscitation, is in great danger of being buried again, and I should like to say a word against its reinterment. I allude to median lithotomy. There will always be difficult cases of stone in the bladder, which lithotrity, with all its improvements, will not be able to touch, and which must be cut. The advocates of the median section, and I confess myself to be a warm one, contend for it that, while it is equally efficacious, it is, in the adult, a less dangerous proceeding than the lateral operation. I have not such frequent opportunities, as I had formerly, as one of the acting surgeons of the Bristol Royal Infirmary, of performing lithotomy; but I have done no other kind of cutting operation for stone for many years, and in any future case should certainly have recourse to it again. In the young boy, the operation is more difficult; and although the usual lateral section is very little fatal in young subjects, I think that the median has two definite advantages. There is less risk of hemorrhage from a cut in the middle line, wherever it is, and the little patient is able to hold his urine sometimes from the actual date of the operation, or the next day, but always much sooner than when the neck of the bladder has been divided laterally. In many cases they have been known to get up and run about the room in two days. In the case of the adult, the wound would not be so deep, there is little or no fear of bleeding, and the power of retaining the water in the bladder is not so completely lost. I have removed stones weighing upward of three ounces, by this method, without any difficulty.

Surgery claims for herself her full share of the wonderful inventions and improvements of this energetic age; and no one may foresee what wonders the next twenty years may bring forth. She is going on in nearly parallel lines with her sister, Medicine, having the same terminus to reach, viz., the relief of human suffering; and at the many points where the lines closely approximate we get the benefit of the recent therapeutical discoveries which she has made, while we, on the other hand, more than repay the debt by the help we are frequently called upon to give.

SECTION OF ANATOMY AND PHYSIOLOGY.

Dr. George M. Humphrey delivered the address in this Section. Touching upon the divergence of physiology and anatomy from one another, he said that it was perfectly natural. As the several members of the great family of science grow older they grow larger, fall away from one another, occupy independent ground and independent laborers, and form centres from which new individualities will in time bud off. In the present instance the separation is, in the main, due, and is the natural and necessary result of, the development as well as growth of the younger of the two sisters which, during the last half century, has been not only unceasingly but in geometrical ratio expanding. It deals with minute structure and the associated delicate processes, leaving to anatomy the investigation of the coarser structures of the body, those which can be carried out with the naked eye. Anatomy is so nearly complete as a science that it is but little progressive. The books on anatomy contain little or no allusion to the practical import of the several structures and their disposition, and the methods of description have usually no reference to this point. All the features are placed too much on the same level, without light and shade, and the whole landscape proves to be proportionately dull and uninviting. This is alse a result—I fear an inevitable result—of that increasing subdivision of labor which causes the investigation and teaching of anatomy to devolve more and more upon the pure anatomist. Moreover, the anatomist does not seem sufficiently alive to the value of that kind of physiological knowledge which is the proper associate of anatomy and which appertains to it in the same way as the study of process appertains to the study of minute structure. Too often the bare naked facts are marshaled in solemn dullness, one after another, and are crammed down the reluctant throat of the student, without spice or flavor of any kind, not to be digested, but to be gulped again, much as they went down, under the examination squeeze. I regard anatomy not only as the veritable basis of medical knowledge, but as the veritable basis also of medical education, and I therefore wish it understood that I by no means deprecate the pure, simple study of anatomy, and it is no small satisfaction to me to have the opportunity of seeing the senior wrangler and the senior classic humbly and cheerfully bending in the dissecting room and applying the earnestness and ability which has gained them their high positions to the elucidation and appreciation of the disclosures which their own forceps and scalpel can make.

Thus, as I grow older, I grow stronger in my respect for anatomy *per se*; but I grow stronger still in my estimation of its capabilities to excite interest, to nurture inquiry, and to strengthen the mental faculties by virtue of the practical and physiological expositions which are its legitimate accompaniments. I feel that its educational as well as its practical value would be greatly increased, if the relations of form and structure to disease and accident and treatment were more fully pointed out. A careful and accurate description of the form of the tibia, for instance, may be and is good in itself; but an account which associated that form with the liabilities to accident and disease, with the various distinctive peculiarities of the human form and gait, with the laws of growth and development, would be far more improving and impressive, because more instructive and suggestive. A student looks at the *plantaris* muscle in the leg. He wonders what need there is for it, and how it comes to be there. He sees that any slight as-

sistance it may render to the great calf muscle is scarcely a sufficient pretext for its existence in a separate form, and he finds relief and pleasure in learning that this little muscle is an *attaché* to the short flexor of the toes; that its severance has been caused by that projection of the heel-bone which is one of the attributes of the erect posture; and that, when it is continuous with the foot-muscle, as is the case in most of the lower animals, it is clearly seen to be the homologue of the *flexor digitorum manûs*. Possibly, he may still indulge in the luxury of speculating as to the law of evolution, by virtue of which it has maintained its individuality through so many ages of comparative uselessness. He looks with vastly increased interest upon the construction of the great toe, when he learns by what slight modification from the lower animal form that solidarity has been given to the human foot, upon which, more than upon any other single specialty in his anatomy, the preëminence of man is due; and he views with respect the flexor and the middle extensor of the thumb, upon finding that the complete segmentation or separation of these muscles from their surroundings is to assist in correlating the free mobility of the human pollex with the fixity of the human hallux. He is agreeably surprised to find that the dry bones in the open valley of the class room are made to live and stand upon their feet, an exceeding great army of instruction and interest, when breathed upon by the teacher, and clothed by him with the warm flesh and blood of development, morphology, mechanical purpose, and practical bearing.

I have said enough to show my hope and my confidence that the anatomy of the coarser structures, with its attendant physiology, will not be allowed to pass into the category of subjects dead and barren as regards scientific character; but that it will be more and more cultivated, not merely for its practical value, but as a repertorium of scientific interest.

With regard to the special subject of physiology, which has relation to minute structure, and more particularly to composition and processes—that is, the *changes*, chemical and physical—of structure, we may be sure that it will never cease to command interest and to engross a large share of attention. It will always be able well to take care of itself. It is essentially and rapidly progressive, and it is illimitable. Its investigations lead in those directions in which there must ever be a near border-land of the seemingly mysterious and inscrutable, to fascinate and tempt the inquirer on. It dives into the deepest recesses of nature's works. It brings to its aid, and gives the greatest range to, chemistry, physics, and mechanics, and advances with them, its progress being checked mainly by their imperfections. It profits by the newest refinements of optical and other instrumental apparatus. Its searchings cannot be confined to dead matter. The very essence of the science demands that the processes, "living as they rise," should be submitted to its scrutiny. It is quite certain that this must be done, and will be done, largely, whether in England or abroad, whether in this generation or the next, whether under Parliamentary control or under trust in the good feeling and conscience of educated men.

The greatest accession to knowledge in medical science which has been made during the era of this Association—one, indeed, of the greatest ever made—is that included under the term "cell-development," which was worked out, in the first instance, by Schleiden and Schwann. This has caused a re-casting of all our ideas of nutrition, including development and growth; and has, at the same time, given an entirely new ground to the science of pathology; for it has shown that the agents which are the media of nutrition are the media also of those modifications of nutrition which we call disease. It has taught us that a malignant cancer growth is probably the result of a perversion of, perhaps, intrinsically only a slight departure from, the ordinary and normal processes of cell growth in the natural tissues; and the suggestion brings with it a ray of hope, that these deviations may one day be checked or prevented, and that this most terrible scourge of humanity may be amenable to treatment. Associated with this great theory are the investigations respecting the movements, the migration, and the absorbing properties of leucocytes, which, as well as the investigations respecting the influence of the medulla oblongata and other ganglionic centres, great and small, upon the action of the heart and blood vessels, and the investigations respecting the formation of sugar and albumen and their modifications, have a very direct bearing upon various pathological processes, and upon some of the most common and important diseases, and must lead to the better treatment as well as the clearer knowledge of those diseases.

The Dangers of the Dairy.

The *Medical Times and Gazette* reports the following instructive case: In the course of a house-to-house inspection, by the inspector of nuisances, he found a family, four members of which had been ill from smallpox during the previous five weeks. No medical man had attended the first case, nor had anything been done to prevent the spread of the disease, either in the house or out of it. The whole family was in a filthy and neglected condition, and the head of it was a man, who, during the five weeks, had been in constant work, in the employment of a dairyman, his duties being the delivery of milk. The existence of the disease in his family had been kept from the knowledge of his employer, who, however, dismissed him from his service on learning from the Board the circumstances of the case.

Professor Von Langenbeck's Successor.

The *Medical Times and Gazette* says that the *Berliner Klinische Wochenschrift* makes the following observations upon the difficulties which lately arose in supplying a successor to Langenbeck: "Our readers are aware that not only Billroth, of Vienna, but also Volkmann, of Halle, declined complying with the call to Berlin. We cannot but, in the interests of our University and city (a large circle in which has manifested great

interest in this nomination), express the liveliest regret at the refusal of two such men, whose names, especially that of the former, must necessarily present themselves when the first German surgeon is sought to be obtained for the chief city of the German Empire. It would, however, be entirely untrue to assign these refusals to any other cause than the personal relations which both clinical professors have established with their respective Universities. And Volkmann's refusal is a strong proof how little reality there is in the fear created phantom that a powerful centralization is to be dreaded. If a town and University like Halle can maintain a rivalry with Berlin, and fetter the wishes of a power of the first rank, this shows how far we, to our great joy, are removed from the condition of things which prevails, for example, in France, where such an occurrence would be an impossibility."

A New Sanitary Association.

Under the presidency of Dr. Cameron, a meeting has been held in Liverpool, to establish an organization, to be called the "Northern Sanitary Association." The object is to provide the best practical advice on sanitary matters at a moderate cost, and to advance sanitary knowledge. A resolution was adopted in favor of such an association, which was influentially supported, the Earl of Derby being the president.

Factory Legislation in France.

Fresh powers for enforcing an old Act of 1848, regulating the duration of the day's work in factories, have been obtained from the Chamber of Deputies by the French government. This law, which fixed the maximum length of a day's work at twelve hours, had almost fallen into desuetude. The inspectors under the Act will be largely reinforced, and the condition of working children is to receive special attention.

Items.

—Prof. Zuckerhand'l has been appointed Professor of Descriptive Anatomy in Gratz.

—The yellow fever prevails as an epidemic in Pensacola, and there is much distress there.

—Diphtheria is reported in a malignant form in some localities in western Pennsylvania and West Virginia.

—In Berlin, during last year, 1809 persons lost their lives by accidents, and 411 persons committed suicide.

—Prof. Fritsch has been elected as Professor of Gynæcology in Breslau. He is the successor of Spiegelberg.

—The position of Professor of Morbid Anatomy in Paris has not been given to Hayem; Cornil has been appointed.

—The Norristown Insane Asylum, in this State, is attacked in the newspapers, for alleged brutal treatment of patients.

—Prof. Joseph Decaisne, the celebrated botanist, died in Paris a few weeks ago, at the age of seventy-six years. He was a pupil of Jussien.

—In Vienna the city government has given, in honor of Skoda, to a recently opened street near the "Allg. Krankenhaus," the name of *Skoda-Gasse.*

—The celebrated naturalist, especially known for his studies in zoölogy and geology, Desor, Professor in Neuenburg, died recently, in his 72d year.

—As candidates for the chair which, at the University of Gratz has become empty by the call of Kundral to Vienna, Prof. Eppinger (Prague), and docent Dr. Weichælbaum (Vienna), have been named.

—Professor Klebs, who gave, by his researches into the cause of typhoid fever, some reputation to the University of Prague, has accepted a call from Zürich, where he is now Professor of Morbid Anatomy and Pathology at the University.

—Six more of the celebrated anatomical plates of Mesal, which, after a drawing of Tizian, were cut in wood by Kalkar, have been detected by an accident. They had been bought from a second-hand dealer, and possess an enormous value.

—On August 31st, the Union Medical Association, composed of physicians of Pennsylvania and Maryland, held its fifth annual meeting at Wildcat, Lancaster county. An address was delivered by the President, Dr. W. Stump Forwood, and an enjoyable day passed.

OBITUARY NOTICE.

DR. EDMUND L. B. WALES,

who died at his residence at Tuckahoe, N. J., on August 18th, was a gentleman well known throughout the State of New Jersey, as well as in this city. During his extended professional life he acquired considerable reputation, and through successful financial operations accumulated a very large fortune. For eighteen years he was Lay Judge of the Court of Errors and Appeals at Trenton, N. J. His death was caused by cancer.

MARRIAGES.

COE—WERDEN.—In New Haven, by the Rev. Jos. T. Duryea, D.D., of Boston, Dr. Harry C. Coe and Miss Sara Werden.

REED—BEAZELL.—July 20th, 1882, by Rev. Geo. MacDonald, John W. Reed, M.D., and Miss Mary M. Beazell, all of Beallsville, Monroe county, O.

VAN DEUSEN—HAPPER.—At the house of the bride's mother, Mrs. Sarah Happer, in Albany, Ill., August 16th, 1882, by Rev. Thomas Galt, of Aurora, Ill., Dr. Robert Van Deusen and Miss S. Belle Happer, both of Albany, Ill.

WILDMAN—COLLIS.—In this city, on the 9th of August, 1882, by the Rev. Charles Citcateri, Dr. Wm. Wildman and Miss Lizzie Collis, youngest daughter of the late Wm. Collis.

DEATHS.

BUDD.—At his residence, in Mount Holly, N. J., on August 14th, 1882, A. E. Budd, M.D.

REYNOLDS.—At the residence of his uncle, Mr. Daniel H. Brooks, at Port Chester, N. Y., on Friday morning, August 18th, Dr. James B. Reynolds.

SUMNER.—Suddenly, in Brooklyn, on Thursday, August 31st, 1882, Albert E. Sumner, M.D., in the 42d year of his age.

TOMES.—August 28th, at his residence, No. 502 Cleason avenue, Brooklyn, Robert Tomes, M.D., in the 66th year of his age.

WALES.—On August 19th, at Tuckahoe, N. J., Dr. E. L. B. Wales, aged 77 years.